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HOOKER'S

ICONES PLANTARUM;

OR,

FIGURES, WITH DESCRIPTIVE CHARACTERS AND REMARKS, OF NEW AND RARE PLANTS,

SELECTED FROM THE

KEW HERBARIUM.

FOURTH SERIES.

EDITED FOR THE BENTHAM TRUSTEES BY

W. T. THISELTON-DYER,

C.M.G., C.I.E., LL.D., M.A., F.R.S.

Director Royal Gardens, Kew.

VOL. V.

OR VOL. XXV. OF THE ENTIRE WORK.

PART I. 2401–2425, November 1895.
PART II. 2426–2450, January 1896.
PART III. 2451–2475, May 1896.
PART IV. 2476–2500, July 1896.

Mo. Bot. Garden,
1896.

DULAU & CO.
37 SOHO SQUARE, LONDON.
1896.

VOL. V.—PART I.] [NOVEMBER.

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DANIEL OLIVER, F.R.S., F.L.S.

EMERITUS PROFESSOR OF BOTANY IN UNIVERSITY COLLEGE, LONDON: LATE KEEPER OF THE HERBARIUM AND LIBRARY, ROYAL BOTANIC GARDENS, KEW.

Under the Authority of the Director of the Royal Botanic Gardens, Kew.

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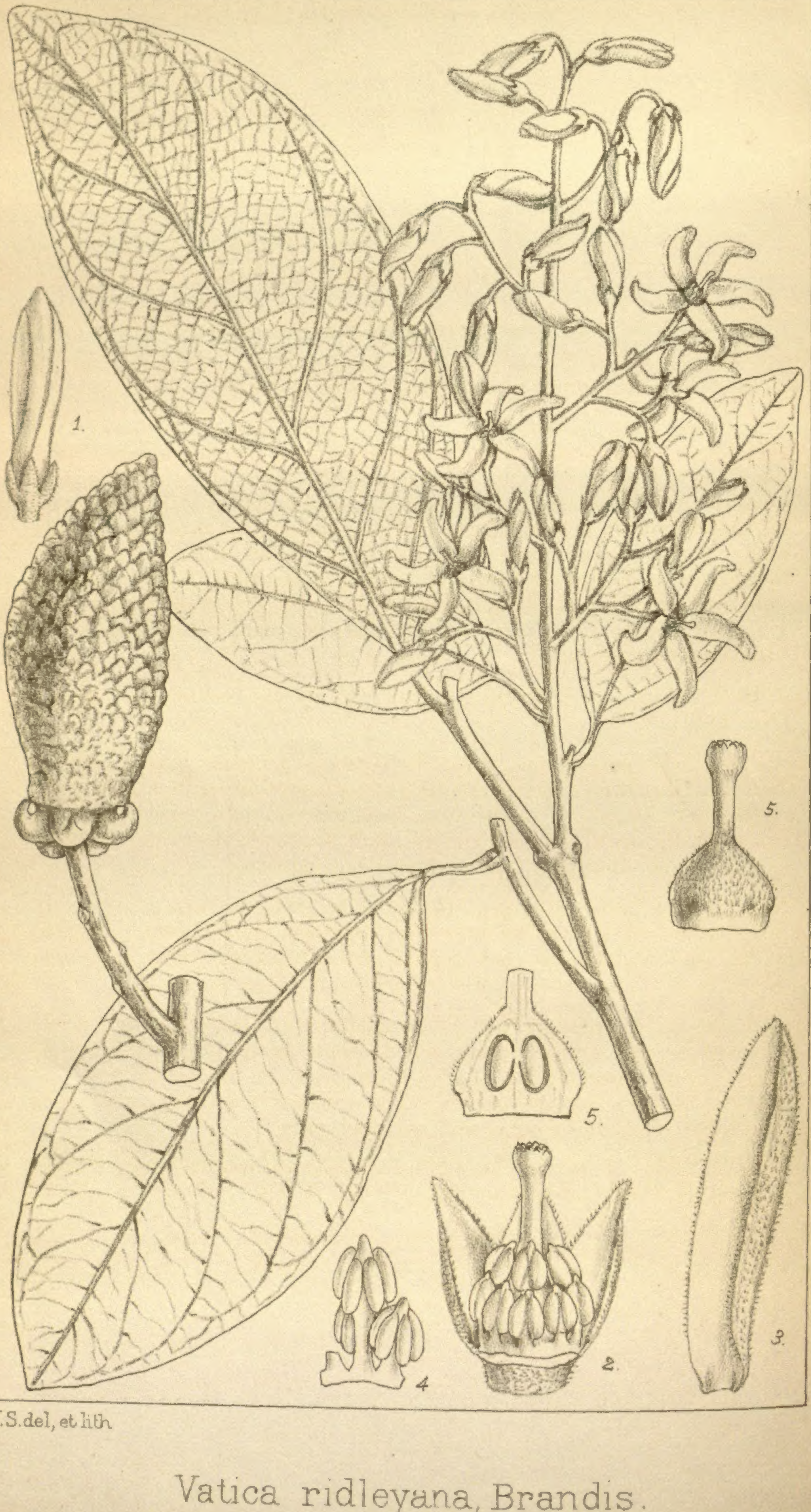
Price Four Shillings.



M.S.del, et lith

Vatica ridleyana, Brandis.

Plate 2401.

VATICA RIDLEYANA, *Brandis.*

Dipterocarpaceæ. Tribe Vaticeæ.

V. ridleyana, *Brandis (sp. nova)*; arbor præter inflorescentiam glaberrima, foliis coriaceis elliptico-oblongis, costa cum nervis secundariis utrinque 5–7 prominentibus, nervis tertiariis arcte reticulatis, floribus longiuscule pedicellatis, petalis lineari-oblongis subfalcatis, staminibus 15, interioribus 5, episepalis, connectivo in appendicem brevissimam producto, ovario omnino supero triloculari dissepimentis tenuissimis, ovulis 6 breviter rostratis, stylo brevi, stigmate capitato, fructu elongato verrucoso breviter et oblique rostrato basi calyce incrassato indurato vix tamen aucto fulto, cotyledonibus carnosis plano-convexis ad basin bifidis amylo repletis.

Hab. Singapore; Changi (No. 2758*a*) by the stream Chandukay (No. 4449), *Ridley.*

Folia 3–5 poll. longa, $1\frac{1}{4}$–2 poll. lata; petiolus $\frac{1}{2}$ poll. longus. *Inflorescentiæ* rami calyx petalaque extus pilis stellatis minutis puberuli. *Staminum* filamenta 5 interiora longiuscula, basi valde dilatata, exteriora 10, brevissima. *Fructus* 2 poll. longus, pericarpium crassum, exocarpium molle, endocarpium durum fere lignosum.

A big tree in dense jungle, often near streams, flowering, like many other species of *Vatica*, before it has attained its full size. Flowers white, fruit brown and firm. Squirrels and monkeys eat the endocarp, which is of the consistence of soft bark.

A species remarkable for its long, obliquely rostrate, warty fruit. The leaves are easily distinguished from those of *V. Scortechini*, which comes nearest, by the small number of secondary and the absence of intermediate nerves. The inflorescence also, calyx and petals, are more finely pubescent.—D. Brandis.

Fig. 1. Bud. 2. Flower, the petals and sepals in front removed. 3. Petal. 4. Detached stamens and vertical section of ovary. 5. Pistil—*all enlarged.*

M. S. del, et lith

Shorea rigida, Brandis

Plate 2402.

SHOREA RIGIDA, *Brandis.*

Dipterocarpaceæ. Tribe Shoreæ.

S. rigida, *Brandis (sp. nov.)*; arbor ingens, ramulis petiolisque verrucoso-scabris, novellis stellato-tomentosis, foliis rigide coriaceis margine revolutis elliptico-oblongis supra glaberrimis nitidis infra pilis stellatis hirsutis nervis secundariis utrinque 18 arcuatis subtus valde prominentibus nervis tertiariis parallelis, floribus sessilibus in paniculis axillaribus et terminalibus, ebracteatis, sepalis inæqualibus extus pilis longiusculis hirsutis intus ad apicem puberulis, petalis oblongis obtusis apice barbatis, staminibus circiter 50, filamentis basi connatis petalisque adhærentibus antheras ter vel quater superantibus, antheris fere orbicularibus omnino exappendiculatis, ovario inferne glabro, superne in stylopodium elongato-conicum pilis longiusculis tomentosum angustato, stylo tenui glabro stylopodium vix æquante, stigmate lato obtuse 3-dentato, fructu tomentoso acuminato basi tantum calycis segmentis tecto.

Hab. Singapore (garden jungle), *Ridley* (No. 6393).

Folia 5–6 poll. longa ad 2 poll. lata; petiolus $\frac{3}{4}$ poll longus. *Calycis* fructiferi segmenta tria majora lineari-oblonga, obtusa, basi angustata, 10-nervia, 4–5 poll. longa. *Fructus* $\frac{2}{3}$ poll. longus. *Cotyledones* crassæ, carnosæ, major bifida; radicula brevis.

Attains 180 feet, with a tall clean stem. Foliage light green; flowers creamy white in great masses; wings of fruiting calyx reddish brown. Flowers in July.

This species belongs to the small section of *Shorea* with inappendiculate anthers which now comprises 6 species of the Malay Peninsula, Sumatra, and Borneo. Some of these, like *S. leprosula*, Miq., have 15 stamens, while others (*S. sericea, rigida*) have a large number.—D. Brandis.

Fig. 1. Portion of leaf showing stellate indumentum. 2. Expanded flower. 3. Same enlarged. 4. Stamen. 5. Vertical section of ovary. *Except fig.* 2, *enlarged.*

M. S. del, et lith

Dipterocarpus Bourdilloni, Brandis.

Plate 2403.

DIPTEROCARPUS BOURDILLONI, *Brandis.*

Dipterocarpaceæ. Tribe Dipterocarpeæ.

D. Bourdilloni, *Brandis* (*sp. nov.*); arbor ingens, ramulis stipulis petiolisque dense fulvo-tomentosis, foliis tenuiter coriaceis longiuscule petiolatis ellipticis breviter acuminatis, subtus præcipue in nervis venisque pilis longis paucis stellatis brevibus plurimis tectis, floribus magnis, calycis tubo glabro turbinato late 5-alato, segmentis duobus linearibus tubum superantibus, petalis lineari-spathulatis extus velutinis, staminibus 30, antheris hastatis, valvis subæqualibus, arista antheram vix æquante, fructibus obovoideis glaberrimis nitidis, segmentis duobus linearibus longis, tribus obtusis fructum æquantibus.

Hab. Evergreen forests on the Periyar river, in North Travancore, at 200–500 ft. above sea-level, *Bourdillon.*

Folia 8–12 poll. longa, 5–7 poll. lata, nervi secundarii utrinque 15–20, tertiarii plerumque paralleli, interdum reticulati; petioli $1\frac{1}{2}$–2 poll. longi. *Flores* 2-pollicares. *Calycis* fructiferi segmenta longiora 5–6 poll. longa, nervis e basi tribus venisque reticulatis conspicuis *Fructus* $1\frac{1}{3}$ poll. longus, alis 5, fructus diametrum dimidium æquantibus.

An enormous tree, 150 feet high, with a straight trunk, 5 feet diameter. Wood not good, but used for dug-out canoes (*Bourdillon*). Leaves corresponding exactly to those of this species were in 1868 collected by me in the evergreen forests on the Carcoor Ghat, in Malabar. In these specimens the long hairs on the midrib predominate, whereas in the Travancore specimens the tufts of stellate hairs predominate. It is probable that this species occurs along the Western Ghats from Malabar southwards, while *D. indicus*, Bedd., is found on the Western Ghats of the more northern districts, particularly in Canara. These are the only two species of *Dipterocarpus* known from the western peninsula of India. While *D. indicus*, Beddome, is nearly related to, and has even been united with, *D. turbinatus*, Gærtn. f., a tree which grows on the west side of the eastern peninsula, from Cachar to Malacca, *D. Bourdilloni* is closely allied to *D. insignis*, Thw., of Ceylon. *D. Bourdilloni* differs, however, in the shape of the leaves, their hairy underside, and longer petioles. The wings of the fruiting-calyx also are different.—D. Brandis.

Fig. 1. Bud. 2. Flower. 3. Anther, back and front view. 4. Base of calyx and ovary, later stage. 5. Vertical section of ovary. *Figs.* 3, 4, *and* 5 *enlarged.*

M.S.del,et lith

Ramisia brasiliensis, Oliv.

Plate 2404.

RAMISIA BRASILIENSIS, *Oliv.*

Nyctagineæ. Tribe Leucasteræ.

Ramisia, *Glaziou in Bull. Soc. Linn. Par.* 1887, 697. *Flores* exinvolucrati, ebracteolati, hermaphroditi. *Perianthium* floriferum profunde 4-fidum, tubo medio contracto inferne turbinato c. 12-costato ovarium cingente, segmentis limbi erectis induplicato-valvatis; perianthium fructiferum accrescens, segmentis limbi explanatis, oblongo-lanceolatis, mucronatis, subæqualibus. *Stamina* 2 leviter perigyna, fere ad basin tubi inserta; filamenta complanata; antheræ didymæ, loculis longitudinaliter dehiscentibus induplicatim applicitis, dorso inferne carnoso-incrassatæ. *Ovarium* liberum, oblique ovoideum, tomentellum; stigma subsessile, obliquum. *Ovulum* solitarium, e basi cavitatis ovarii erectum, campylotropum. *Semina* . . . Arbor mediocris, *ramulis flexuosis teretibus, novellis lepidotis, deinde glabratis.* Folia *alterna, petiolata, membranacea v. tenuiter coriacea, elliptica, obtusa v. obtuse acutata, basi cuneata v. leviter rotundata, supra glabra, subtus appresse subargenteo- v. brunneo-lepidotis.* Flores *viridescentes sæpius in fasciculis paucifloris v. racemulis axillaribus breviter pedicellatis, extus lepidotis.*

E. brasiliensis, *Oliver* (*sp. unica*).

Hab. Brazil; Minas Geraes, *Glaziou* (No. 15,385); R. Janeiro, near Cantagallo (No. 16,320; No. 14,221 near Rio).

Folia 2–5 (sæpius $2\frac{1}{3}$–$3\frac{1}{2}$) poll. longa. *Flores* 6–7 lin. longi: perianthium fructiferum $1\frac{1}{2}$ poll. latum; segmenta explanata $\frac{3}{4}$ poll. longa, $\frac{1}{3}$ poll. lata; tubus infra constrictionem $1\frac{1}{2}$–2 lin. longus atq. latus.

Unfortunately, I have not succeeded in finding well-ripened seeds of this very interesting plant, but there can be no doubt of its affinity, and that it is a near ally of *Reichenbachia*, Spreng. and *Leucaster*, Chois. to the former of which genera I was at first disposed to refer it. It differs from *Reichenbachia* in its much-accrescent, deeply divided perianth, and distinct perigyny of its stamens.* It presents very singular analogy, as M. Baillon, *l.c.*, points out, with *Elæagnus* in its lepidote indumentum, inflorescence, form of perianth, the lower part of the tube constricted around the ovary, and monocarpellary pistil. It is, however, diandrous, and the ovule (and doubtless the fruit) is clearly Nyctagineous. Whether we have here a suggestion of phyllogenic relationship with *Elæagnus* may be a question worthy of consideration. As M. Baillon, *l.c.*, simply cites a MS. generic name (only) of M. Glaziou for this plant, with a full, but not formal, description of it, I have thought it expedient to give a description in the usual form.—D. Oliver.

Fig. 1. Flower. 2. Detached scale of its indumentum. 3. Vertical section of flower. 4. Stamen, back and front view. 5. Accrescent limb of perianth—*all enlarged.*

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* I observe M. Baillon speaks of the stamens as hypogynous. I have re-examined a flower with regard to this, and can only confirm the description as given above.

M.S del et lith

Lysimachia grandifolia, Hemsl

Plate 2405.

LYSIMACHIA GRANDIFOLIA, *Hemsl.*

Primulaceæ. Tribe Lysimachieæ.

L. grandifolia, *Hemsl. in Kew Bulletin*, 1895, 107. Herba bipedalis, caule erecto glabrato, foliis alternis longiuscule petiolatis ellipticis v. ovato-ellipticis acutis basi leviter rotundatis margine laminæ petiolique pilosulis costa subtus nervisque primariis sparse setuloso pilosis lamina supra pilis rarissimis obsita, floribus flavis in umbellis pauci- v. pluri-floris pedunculatis ex axillis superioribus dispositis, bracteis involucrantibus lanceolatis pedicellis minute glandulosis brevioribus, calycis 5-partiti segmentis lanceolatis v. ovato-lanceolatis, corolla profunde 5-fida calycem superante segmentis ovato-ellipticis obtusis eglandulosis, staminibus basi corollæ insertis, filamentis brevibus basi dilatatis brevissime annulatim coalitis, antheris basi cordatis apicem versus angustatis filamento 2-3 plo longioribus, staminodia o, ovario subgloboso glabro, stylo ovario 3-plo longiore, ovulis numerosis.

Hab. Northern Siam, *F. H. Smiles.*

Folia $4\frac{1}{2}$–$6\frac{1}{5}$ poll. longa, 2–$3\frac{3}{1}$ poll. lata ; petiolus 1–$2\frac{1}{2}$ poll. longus. *Flores* $\frac{1}{2}$–$\frac{3}{4}$ poll. diam. ; pedicelli $\frac{3}{4}$–1 poll. longi.

Notwithstanding the protean character of the genus *Lysimachia* whether in respect of general habit, foliage, or inflorescence, I am unable to cite any species known to me in the Kew Herbarium to which this curious species offers a general resemblance, unless, indeed, it be *L. umbellifera*, Ph. of Chili, and that is sufficiently distinct.—D. Oliver.

Fig. 1. Part of calyx and ovary. 2. Corolla laid open. *Enlarged.*

Daniella thurifera, Benn.

Plate 2406.

DANIELLA THURIFERA, *Benn.*

Leguminosæ. Tribe Amherstieæ.

D. thurifera, *J. J. Bennett in Pharm. Journ.* xiv. (1855) 252; arbor excelsa glaberrima, foliis magnitudine valde variabilis (in adultis floriferis 4–12 poll. in junioribus $1\frac{1}{2}$ ped. longis) foliolis 5–8-jugis coriaceis ovato- v. elliptico-oblongis obtusiusculis basi sæpius late rotundatis, paniculis multifloris bracteis bracteolisque caducissimis, calycis tubo clavato segmentis 4 obovato- v. ovali-oblongis, petalo postico oblongo calyce breviore glandulifero cæteris rudimentariis, filamenta libera glabra, ovario glabro compresso gynophoro subæquilongo, ovulis c. 12 supra medium cavitatis dependentibus, legumine oblique ovato sæpius monospermo; *Oliv. Fl. Trop. Afr.* ii. 300.

Hab. Sierra Leone, *Dr. Daniell*, *M. L. Melville*; Senegambia, *Heudelot*; Nigritania, *Barter*.

Arbor 50–150-pedalis. *Folia* alterna, abrupte pinnata, petiolo communi subtereti 2–14 poll. longo; foliola $1\frac{1}{2}$–$7\frac{1}{2}$ poll. longa, subtus rete venarum conspicuo, plus minus pellucide punctata; petiolulus 2–6 lin. longus. *Panicula* multiflora, ramis alternis patentibus recurvisve; pedicelli 3–6 lin. longi; bracteæ caducissimæ obovatæ v. oblongæ $\frac{1}{4}$–$\frac{1}{3}$ poll. longæ; bracteolæ geminatæ, caducissimæ, tenuiter coriaceæ $\frac{1}{3}$ poll. longæ. *Calyx* tubo 3–5 lin. longo, limbi segmenta $\frac{1}{2}$ poll. longa. *Petala* lateralia et antica rudimentaria. *Legumen* 2–$2\frac{1}{2}$ poll. longum, $1\frac{1}{4}$–$1\frac{1}{2}$ poll. latum, endocarpio secedente. *Semen* funiculatum, funiculo hilo dilatato.

This is the tree affording the frankincense of Sierra Leone, called by the natives *Bungo* or *Bumbo* (or according to Mr. Bennett, *l.c.*, these are the names applied by the Leonese to the exuded fragrant resin); known also as the *Thiévi* in Senegambia. A note by Mr. Melville on the tree and its resin is given in the 'Miscellaneous Notices' appended to vol. 25 (1839) of Lindley's 'Botanical Register,' and a note in MS. by the same gentleman, addressed to Sir W. J. Hooker, is preserved in the Kew Herbarium. Mr. Melville speaks of the timber as reputed to be peculiarly adapted to resist 'the usual effects of damp and wet.' He says 'only the oldest and loftiest trees flower, and that on the topmost branches.' Mr. Barter describes the flowers as white, and simply states that the natives collect a gum like copal from the tree. Besides *D. oblonga*, Oliv., of Fernando Po, collected by Barter and Mann,* we have imperfect material from Lagos and the Yoruba region, indicating one or two as yet undescribed allies affording the *Ogea*, *Wjea*, or *Oguja* gum-resin. Of these we hope soon to have adequate material for description.—D. Oliver.

Fig. 1. Flower, calyx-segments removed. 2. Posterior petal. 3. Anther. 4. Pistil, the ovary laid open. *All enlarged.*

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* Mann's Fernando Po specimen I referred in my Flora, *l.c.*, to *D. thurifera*, but on re-examination I think it agrees with *D. oblonga*. It has tomentose stamens, connate at base, besides other differences from *D. thurifera*, *Benn.*

M.S. del, et lith.

Heteropyxis canescens, Oliv.

Plate 2407.

HETEROPYXIS CANESCENS, *Oliv.*

Lythraceæ.

H. canescens, *Oliv.* (*sp. nov.*) ; arbuscula, ramulis novellis inflorescentiaque leviter cano-pubescentibus, foliis elongato-ovalibus acumiatis obtusiusculis basi in petiolum angustatis margine angustissime incrassatis subrevolutis utrinque præcipue subtus in costa parce pilosulis mox supra glabratis parce pellucido-punctatis, cymulis compactis in paniculis breviter pedunculatis terminalibus et in axillis superioribus folio multo brevioribus dispositis, floribus brevissime pedicellatis 4- v. 5-meris, capsula vix aut leviter exserta.

Hab. Transvaal, Barberton, at Rimer's Creek, *Galpin* (No. 518).

Arbuscula 25-pedalis. *Folia* $3\frac{1}{2}$–6 poll. longa, $\frac{3}{4}$–$1\frac{1}{4}$ poll. lata ; petiolus $\frac{1}{4}$ poll. longus. *Calyx* breviter campanulata, dentibus obtuse deltoideis. *Petala* rotundata, subsessilia, leviter concava, parce pellucide punctata, æstivatione late imbricata. *Stamina* medio calycis tubi inserta, petala superantia ; filamenta subulata, glabra, exserta. *Ovarium* turbinatum, apice depressum, biloculare ; stylus ovario æquilongus ; stigma capitellatum. *Capsula* subglobosa, loculicide bivalvis, valvis latis retusis. *Semina* plurima, angulata.

Hitherto this interesting genus, which Professor Baillion approximates to *Crypteronia*, has been represented by the original species figured by the late Professor Harvey (Thes. Cap. pl. 128). Mr. Galpin's excellent specimens just received have much in common with *H. natalensis*, Harv., differing in the ampler foliage, with the lateral looping primary veins of the leaves directed forward at an acute angle, the slight indumentum canescent in young shoots and inflorescences, more sessile rotundate petals, and in the very slightly exserted capsule.—D. Oliver.

Fig. 1. Portion of leaf-margin. 2. Flower. 3. Same laid open, the petals removed. 4. Petal. 5. Fruit, enclosed in calyx. 6. Vertical section of ovary. *All enlarged.*

Comoroa pisocarpa, Oliv.

Plate 2408.

COMOROA PISOCARPA, *Oliv.*

Rutaceæ. Tribe Aurantieæ.

Comoroa, *Oliv.* (*gen. nov.*) *Flores* 4-meri, ut videtur abortu unisexuales. *Calyx* cupuliformis v. breviter campanulatus, 4-fidus, lobis rotundatis. *Petala* hypogyna, 4, oblonga, obtusa, basi filamentis adnata, æstivatione imbricata. *Stamina* isomera, petalis æquilonga ; filamenta anguste linearia, complanata ; antheræ ovatæ, dorso infra medium affixæ, longitudinaliter dehiscentes, inappendiculatæ. *Pistillum* (in specc. nostris floriferis) rudimentarium ovoideum in stylum angustatum, ovario sine cavitate ovulifero. *Fructus* pisiformis indehiscens (?), subglobosus, monospermus, epicarpio tenuiter carnoso, mesocarpio reticulatim fibroso, endocarpio tenuiter crustaceo. *Semen* sine dubio pendulum, exalbuminosum, cotyledonibus plano convexis, radicula supera, brevissima, truncata.—Arbuscula (?) *glaberrima, ramis teretibus lævibus.* Folia *alterna, petiolata, unifoliolata, lamina basi articulata, oblongo-ovalis, interdum apice leviter acuminata, obtusiuscula, basi angustata integra pellucido-punctata.* Flores in *paniculis terminalibus v. axillaribus pluriflоris* (*axillaribus sæpius folio multo brevioribus*) *sessilibus v. brevissime pedicellatis sæpe fasciculatim glomerati ; bracteis minutis late ovatis.*

Hab. Comoro Islands : Angazija or Great Comoro, collected by natives for *Dr.* (now *Sir*) *John Kirk.*

This plant has for many years remained undetermined amongst the doubtful Rutaceæ of this herbarium. Although we do not possess female flowers, yet with excellent specimens in fruit and others bearing staminate flowers, I think we are justified in naming it. Our leaves are all 1-foliolate with a conspicuous articulation near the apex of the petiole ; possibly triphyllous forms may occur. A curious point in the floral structure is the adhesion of the base of the petals to the filaments, so that the corolla is quasi-gamophyllous—a rare condition, if indeed it occurs at all in this section of Rutaceæ, unless it be in *Atalantia monophylla*, in which the petals sometimes adhere to the staminal tube. The rudimentary pistil in the antheriferous flowers is by no means minute, but I find the basal portion solid without trace of cavity or ovules ; it is central and symmetrical.—*D.* Oliver.

Fig. 1. Bud. 2. Pistillate flower, petals removed. 3. ♂. Corolla and stamens. 4. Endocarp. *All enlarged.*

M.S. del, et lith.

Daphnopsis Beta, Taub.

Plate 2409.

DAPHNOPSIS BETA, *Taubert.*

Thymelæaceæ.

D. Beta, *Taubert in Engl. Bot. Jahrb.* xii., *Beibl.* No. 27, p. 5 ; foliis petiolatis tenuiter coriaceis ovali-oblongis oblanceolatisve apice acutiusculis v. obtusis basin versus angustatis novellis plus minus piloso-hirtellis mox glabrescentibus, floribus polygamo-dioicis in racemis hirtis axillaribus folio multo brevioribus pedunculatis dispositis ebracteatis pedicellatis, pedicellis defloratis persistentibus sæpius recurvis, perianthio breviter campanulato 4-fido segmentis deltoideo-ovatis patentibus reflexisve tubo intus dense hirsuto, staminibus (in fl. quasi-hermaphroditis) biseriatis breviter exsertis, squamis hypogynis, c. 8-10 brevibus subulatis (basi vel per paria coalitis liberisve), ovario libero ellipsoideo dense lanato.

Hab. S. Brazil, near Rio, *Glaziou* (No. 11,481, No. 19,813).

Folia cum petiolo ($\frac{1}{4}$–$\frac{1}{3}$ poll. longo), $3\frac{1}{2}$–5 poll. longa. *Racemi* $\frac{1}{2}$–$1\frac{1}{2}$ poll. longi.

I incline to think that *Bosca stupacea*, Vell. (Fl. Flum. 150, vol. iv. Tab. 11), may be identical with the above. In the 'Genera Plantarum' of Bentham and Hooker, *Bosca* is referred to under *Funifera*. Prof. Baillon and Dr. Gilg (Engl. and Prantl, Pfl. Fam., Thymel. 236) refer it to the same genus. If *Funifera* be maintained as distinct from *Daphnopsis* I should say Bosca should certainly fall into the latter, as indeed the note in the 'Gen. Plant.' (iii. 195) hints. The staminate flowers which I have examined contain an apparently well-developed ovary, with a solitary anatropous pendulous ovary, but they fall away, leaving the persistent recurved base of the pedicels.—D. Oliver.

Fig. 1. ♂ flower. 2. Ovary of same with hypogynous scales. 3. ♀ flower. 4. Ovary of same. 5. Vertical section of ovary. 6. Seed. *All enlarged.*

M.S.del et lith.

Petrocosmea grandiflora, Hemsl

Plate 2410.

PETROCOSMEA GRANDIFLORA, *Hemsl.*

Gesneraceæ. Tribe Cyrtandreæ.

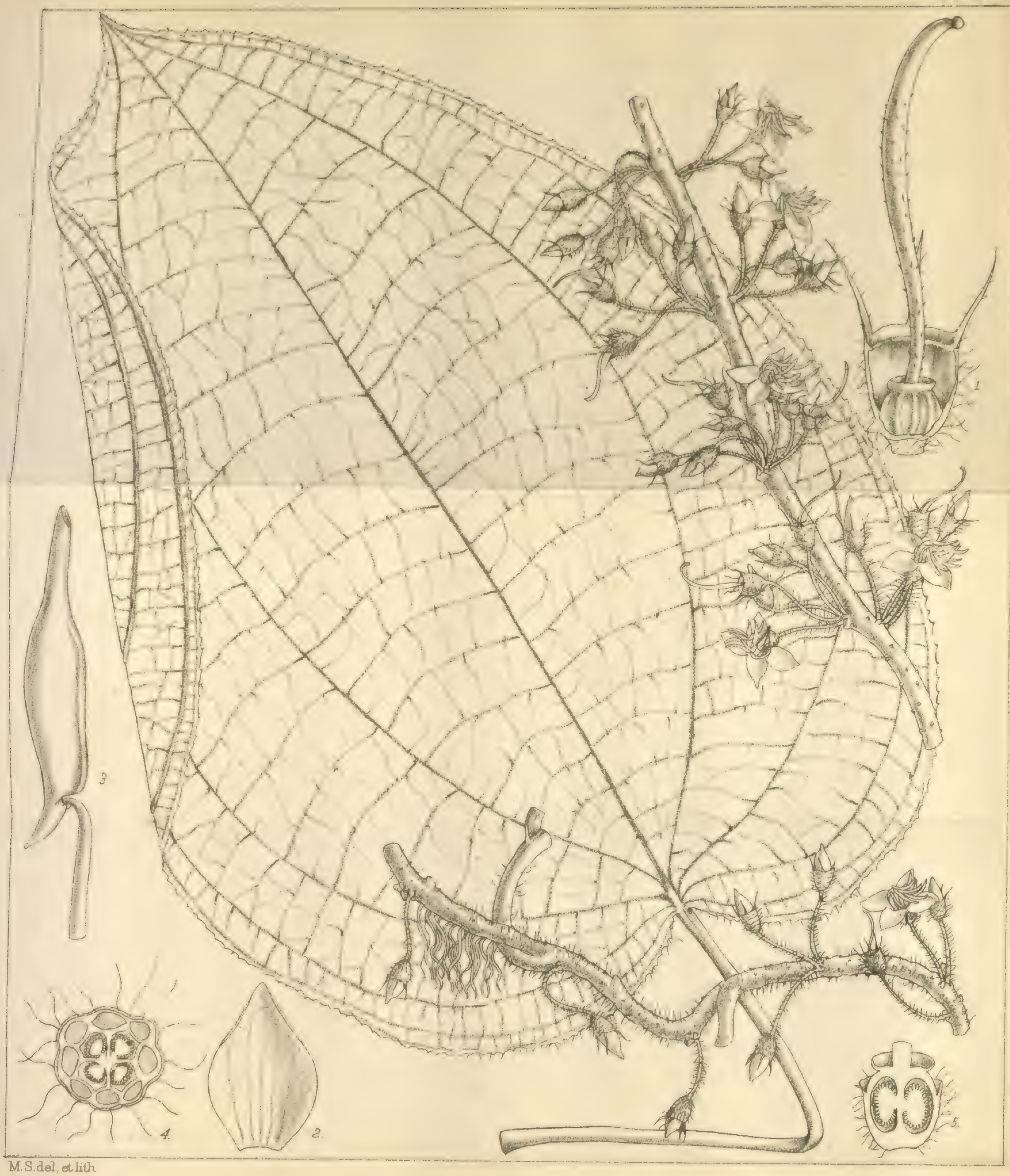
P. grandiflora, *Hemsley in Kew Bull.* 1895, 115 ; acaulis, cæspitosa, foliis numerosis appressis longe v. longissime petiolatis papyraceis mollis oblongis lanceolatis ovatisve rarius fere orbicularibus vix acutis basi cuneatis v. interdum rotundatis ubique longe sericeo-pilosis, pedunculis gracilibus foliis brevioribus uni- v. perraro bi-floris medio bibracteatis, bracteis parvis linearibus, calycis segmentis fere liberis inæquilongis lineari-lanceolatis acutis pilosis, corolla cærulea obliqua inæqualiter bilabiata, labio postico multo minore, lobis omnibus latis rotundatis, staminibus 2 filamentis brevibus incrassatis hirsutis, antheris magnis, loculis connectivo incrassato hirsuto sejunctis, ovario hirsuto, stylo hirsuto gracili bis curvato, id est rursum prorsum curvato, capsula ignota.

Hab. Western China : Mongtse, Yunnan, crevices of limestone precipices at 6400 feet alt. *Hancock* (No. 115).

Folia maxima cum petiolo 6 poll. longa ; lamina $\frac{1}{2}$–$2\frac{1}{2}$ poll. longa. *Pedunculi* 1–2 poll. longi. *Calycis* segmenta $1\frac{1}{2}$–2 lin. longa. *Corolla* 1–$1\frac{1}{4}$ poll. diametro ; labium anticum 10–12 lin. latum.

Mr. Hancock describes the flowers of this charming little plant as cobalt-blue. The only other known species is *P. sinensis*, Oliv., in 'Icones Plantarum,' t. 1716.—W. B. Hemsley.

Fig. 1. Calyx and ovary. 2. Base of corolla, with stamens and staminodes. *Enlarged.*



M.S.del, et lith

Medinilla serpens, Stapf.

Plate 2411.

MEDINILLA SERPENS, *Stapf.*

Melastomaceæ. Tribe Dissochæteæ.

M. (§. **Heteroblemma**) **serpens,** *Stapf* (*sp. nov.*); foliis amplis cordato-ovatis vel rotundatis abrupte breviterque acuminatis minute serrulatis membranaceis 7-plinerviis nervis basin versus subtus setulosis superne ut venæ transversæ prominulæ subfurfuraceis, petiolo laminæ æquilongo vel breviore plus minusve setuloso vel glabrato, floribus in fasciculis 3–5-floris e ramis vetustis et junioribus, pedicellis gracilibus ut calyx campanulatus truncatus dentibus subulatis limbi margini impositis deciduis ornatus patule setosis.

Hab. Borneo : Sarawak, near Kuching, *Haviland* (No. 551).

Folia ad 9 poll. longa, ad 7 poll. lata ; petiolus ad 6 poll. longa. *Pedicelli* ad $\frac{1}{2}$ poll. longi. *Calyx* 2 lin. longus. *Corolla* $3\frac{1}{2}$ lin. longa. *Antheræ* $3\frac{1}{2}$ lin. longæ.

The section *Heteroblemma* was established by Blume on *Medinilla alternifolia*, Bl., from Sumatra ; but subsequent writers, including Cogniaux, do not seem to have taken any notice of it. The recent collections of Dr. G. D. Haviland, however, show that it is not an odd aberrant form, but the type of a well-characterised group of *Medinilla* which deserves certainly sectional rank. As the name *Heteroblemma* (ἕτερος = different, βλέμμα = aspect) indicates, it differs from the other species of *Medinilla* very strikingly in habit ; a difference which is brought about by the long and slender branches, which climb by means of aërial roots, and by the alternate, generally long-petioled, and often large leaves, the transverse venation of which is more marked than in most other *Medinillæ*. The flowers come in bundles, generally from old branches, as is often the case in the genus, and do not differ in any essential point from those of typical species of *Medinilla*. They are, however, as Blume has already noticed, characterised by the almost entire suppression of the anterior lobes of the connective of the stamens. I refer to this section also, *M. decurrens*, Cogn., from Sarawak (*Beccari*, 4016), *M. lorata*, Stapf, which is figured on Plate 2417, and *M. flagellata*, the description of which follows here.

M. (§ **Heteroblemma**) **flagellata,** *Stapf* (*sp. nov.*) ; ramis vetustis ver-

M S del, et lith

Orthæa cordata, Oliv.

Plate 2412.

ORTHÆA CORDATA, *Oliv.*

Vacciniaceæ. Tribe Thibaudieæ.

O. cordata, *Oliv.* (*sp. nov.*) frutex vagans, ramis elongatis longe dependentibus angulatis novellis parce hirtis, foliis subsessilibus v. brevissime petiolatis coriaceis 5-nerviis ovato- v. elliptico-oblongis subacutis v. breviter obtusiuscule acuminatis basi cordatis subtus præcipue in costa nervisque parce pubescentibus glabratisve, racemis multifloris quasi-terminalibus breviter pedunculatis pubescentibus, bracteis membranaceis alabastris subæquilongis cito caducis, bracteolis subulatis, pedicellis superne leviter incrassatis apice articulatis, calycis tubo basi intruso limbo quam tubo paullo longiore segmentis ovato-lanceolatis acutiusculis, corolla tubulosa infra medium sensim dilatata ore angusta fere truncata lobis brevissimis erectis ovato-rotundatis æstivatione induplicatim plicatis, staminibus imæ corollæ insertis corolla 3–4 plo brevioribus, loculis antherarum apice brevissime liberis poro truncato dehiscentibus.

Hab. South America ; Columbia, between Oçana and Pamplona, 6000 ft., *Kalbreyer* (No. 1059).

Folia 4–7 poll. longa, 2–2¾ poll. lata. *Racemi* semipedales. *Flores* viridi-rubescentes, 1–1¼ poll. longi. *Filamenta* libera, complanata, apice angustata, dorso parce hirsuta ; antheræ oblongæ, prope basin affixæ. *Ovarium* 5-loculare ; ovula ∞ ; stylus rectus, gracilis, glaber ; stigma capitellatum ; discus styli basin circumcingens breviter annulatim elevatus.

This plant has long rested amongst our doubtful Thibaudieæ, but I think if *Orthæa* be maintained in a group of genera the diagnostic marks of which are somewhat arbitrary, it may be referred to that genus with little hesitation. The anthers are remarkable in their very short free apical tubes, truncate in their broad terminal pores. *Orthæa* is maintained by Dr. Baillon (with a ?) in his 'Hist. des Plantes,' xi. 187, but reduced to *Thibaudia* by Dr. Drude in Engl. and Prantl, Pflanzenfam., Ericaceæ, 54.—D. Oliver.

Fig. 1. Vertical section of calyx and ovary. 2. Transverse section of apex of corolla, showing æstivation. 3. Corolla-lobes laid open. 4. Stamens, front and back views. *All enlaryed,*

M. S. del et lith.

Lissocarpa Benthami, Gürke.

Plate 2413.

LISSOCARPA BENTHAMI, *Gürke.*

'Styraceæ ?'

L. Benthami, *Gürke in Engl. and Prantl, Pflanzenf., Styracacea*, p. 180. Arbuscula glaberrima, foliis breviter petiolatis ovali-oblongis v. oblongo- v. ovato-ellipticis obtusiusculis basi cuneatis v. leviter rotundatis coriaceis nitidis tenuiter venosis, floribus sordide luteis in racemis brevibus plurifloris folio multo brevioribus fasciculatim dispositis, bracteis parvis ovato-rotundatis coriaceis deciduis pedicello brevi sublongioribus, bracteolis geminatis basi ovarii insertis persistentibus, fructibus ovoideis 2–1-spermis, pericarpio carnosulo in sicco crustaceo nitido.

Hab. South America : Amazonia, near San Carlos, and on the Guainia ; *Spruce* (Nos. 3108, 3504).

Arbuscula 18–20-pedalis (*Spr.*). *Folia* integerrima subtus opaca, 4–6 poll. longa, $1\frac{1}{3}$–$2\frac{2}{3}$ poll. lata ; petiolus $\frac{1}{6}$–$\frac{1}{4}$ poll. longus. *Inflorescentia* $\frac{3}{4}$–1 poll longa. *Alabastra* $\frac{1}{2}$–$\frac{2}{3}$ poll. longa. *Calyx* tubo carnoso, in sicco lacunoso v. quasi costato, ovario adnato ; limbo tubo subæquilongo, 4-fido, segmentis coriaceis late rotundatis, retusis, æstivatione contorto-imbricatis. *Corolla* 4-fida, tubus cylindricus limbo fere æquilongus ; segmenta limbi ovato- v. obovato-elliptica obtusa tempore florif. patula, in alabastro erecta, æstivatione contorto-imbricata. *Tubum staminiferum* epipetalum, apice 8-lobatum, lobis lanceolatis, contorto-imbricatis, breviter exsertis. *Antheræ* anguste lineares inclusæ tubo staminifero ad basin insertæ, æquales, quasi-uniseriatæ ; filamenta brevissima. *Ovarium* omnino inferum, 4-loculare ; ovula in loculis geminatis, pendulis. *Fructus* $\frac{1}{2}$ poll. longus. *Semina* (in fruct. dispermo) plano-convexa ; testa longitudinaliter costata; albumen copiosum corneum ; embryo subteres, albumine fere dimidio brevior.

I have left this remarkable plant where Mr. Bentham placed it—in Styraceæ—although I think its affinity may rather be with Ebenaceæ, of which it has the general facies and horny albumen. The ovary, however, is wholly inferior, not '*fere superum*,' as stated by Mr. Bentham (in 'Gen. Plant.' ii. 671) ; the fruit also is crowned by the persistent coriaceous contorted segments of the calyx-limb, not '*calyci impositus*' (*l.c.* 667). Mr. Bentham has evidently taken the calyculus of paired bracteoles at the base of the fruit for the calyx. The available material in a good state for analysis is, unfortunately, too small to enable me to clear up the relation of what I have called the staminiferous tube to the anthers. I take it, however, that the anthers are free from the tube, though sometimes, in bud, not readily separable. The description given by Herr Gürke would seem to have been taken from the 'Genera,' and not from original observation, or the inaccuracies referred to would have been detected. —D. Oliver.

Fig. 1. Bud. 2. Longitudinal section of calyx and inferior ovary. 3. Corolla laid open. 4. Anther 5. Transverse section of ovary. 6. Fruit. 7. Apex of same, showing the persistent limb of the calyx. 8. Seed. 9. Longitudinal section of same, showing the embryo. *Excepting fig.* 6, *enlarged.*

M.S.del, Stapfanal.

Driessenia scorpioidea, Stapf.

Plate 2414.

DRIESSENIA SCORPIOIDEA, *Stapf.*

Melastomaceæ. Tribe Oxysporeæ.

D. (§ **Scorpioides**, *sectio nova inflorescentia paniculata ramis vel ramulis eximie scorpioideis*) **scorpioidea**, *Stapf* (*sp. nov.*) ; caule quadrangulari fusco glanduloso-furfuraceo, foliis oppositis paulo inæqualibus late ovatis vel ellipticis basi breviter vel obscure cordatis apice breviter abrupte acuminatis integris 7–9 nervibus venis transversis distinctis subhorizontalibus supra sparse glandulosis subtus glaucescentibus vel fulvescentibus dense glandulis minimis nitidis vestitis, petiolo longiusculo lateraliter compresso supra canaliculato fusco glanduloso-furfuraceo, paniculis terminalibus et ex axillis foliorum summorum minorum fusco- vel fulvo-glandulosis fere a basi ramosis vel longe pedunculatis, floribus dense scorpioideis in ramis vel ramulis divergentibus dispositis, pedicellis brevibus crassiusculis, calyce sub anthesi tubuloso-campanulato subtruncato glanduloso, petalis rotundato-obovatis obtusis, staminibus 8 paulo inæqualibus, capsula primo calyce globoso apice valde constricte demum circa valvas rumpente inclusa 4-valvi.

Hab. Borneo : Sarawak, Niah ; *Hariland* and *Hose* (No. 3222). *Folia* majora ad 7 poll. longa, ad $6\frac{3}{4}$ poll. lata ; petiolus ad 2 poll. longus. *Panicula* ad 4 poll. longa, paulo supra basin ramis 2 oppositis iterum fere e basi ramulosis emittens, deinde ad 2-3 poll. nuda vel a basi ad 2 poll. nuda (i.e. longiuscule pedunculata) ; pedicelli ad 1 lin. longi. *Calyx* 1–$1\frac{1}{2}$ lin. longus. Petala $\frac{3}{4}$ lin. longa. *Capsula* $1\frac{1}{2}$ lin. diam.

The structure of the flower and fruit is quite that of *Driessenia axantha*, Korth. or *D. microthrix*, Stapf ; but the panicles are larger than in any other species, and, above all, distinguished by the distinctly scorpioid arrangement of the flowers. Moreover, the whole plant is more or less densely covered with minute glands, which consist of four cells in cross position. They are particularly numerous and minute on the lower surface of the leaves, which therefore appear pruinose.

Another species of the same section is represented by a specimen collected by Dr. G. D. Haviland on 'conglomerate sandstone' in primeval forest at Bongsitu, Sarawak, at an altitude of 800 feet.

M S del, Stapfanal.

Hederella multiflora, Stapf

Plate 2415.

HEDERELLA MULTIFLORA, *Stapf.*

Melastomaceæ. Tribe Dissochæteæ.

Hederella, *Stapf* (*gen. nov.*); *flores* 4-meri. *Calycis* glabri vel tomentosi tubus ovoideus vel obconicus; limbus truncatus. *Petala* oblonga ovata vel lanceolata, acuta. *Stamina* 8, inæqualia, episepala majora fertilia, rarius sterilia, epipetala minora sterilia, rarius fertilia, vel 4 episepala; antheræ basifixæ, oblongæ lanceolatæ vel lineares, obtusæ vel subrostratæ, 1-porosæ; connectivo basi plerumque haud producto, antice appendicibus 2 subulatis vel linearibus, postice calcarato. *Ovarium* totum vel ope septorum 4 vel 8 tubo calycino adnatum, 4-loculare, vertice subplano vel plus minusve conico glabrum vel tomentellum; stylus filiformis, stigmate punctiformi. *Fructus* maturus ignotus sed e structura anatomica fructuum juvenilium certe baccatus. —Frutices *Malayani repentes sarmentosi, glabri vel furfuracei, ramis flexuosis angularibus vetustis 4-sulcatis.* Folia *opposita vel unum unius cuiusque paris minutum deciduum vel suppressum ideoque alternantia, petiolata, ovata, coriacea, integerrima, 3–5-nervia, venis transversis nullis vel obscuris paucis.* Flores *pedicellati, in umbellis breviter v. longe pedunculatis rarius paniculatis rarius solitarii, semper axillares vel e ligno vetusto.*

H. multiflora, *Stapf* (*sp. nov.*); glaberrima, foliis oppositis æqualibus late ovatis basi rotundatis vel subcordatis acuminatis, umbellis axillaribus longe pedunculatis interdum paniculatis ad 10-floris, pedicellis calyce duplo longioribus, calyce ovoideo, petalis in alabastris in conum gracilem contortis lanceolatis roseis, staminibus 8 episepalis linearibus obtusis calcare triangulari, epipetalis breviter lanceolatis obtusis calcare longiusculo subulato, ovarii vertice glabro conico.

Hab. Borneo: Sarawak, Matang, alt. 1600 feet, epiphytic on a tall tree, *Haviland.*

Folia ad 3 poll. longa, ad 2 poll. lata; petiolus 1–1¼ poll. longus. *Pedunculus* ad 2 poll. longus; pedicelli ad 5 lin. longi. *Calyx* 3 lin. longi. *Petala* ad 3 lin. longi.

Besides *H. quintuplinervis*, figured overleaf, I refer to this genus also the following two species:

H. tetrandra, *Stapf* (*sp. nov.*); ramorum apicibus foliis admodum juvenilibus atque inflorescentiis junioribus ferrugineo-furfuraceis

exceptis glabra, ramis junioribus gracilibus flexuosis longis ope radiculorum substrato affixis, vetustis grosse 5-sulcatis cortice pallido, foliis rotundato-ovatis vel ellipticis basi rotundatis vel subcordatis, breviter acuminatis, subquintuplinerviis, sicco nigricantibus, umbellis ex axillis foliorum longe vel brevius pedunculatis 2-8-floris, pedicellis longiusculis crassiusculis, calyce obconico, petalis in alabastris in conum brevem acutum contortis oblongis, staminibus 4 episepalis, antheris lanceolatis subrostratis, connectivo basi haud producto antice bilobo lobis subulatis postice triangulari-calcarato, ovario vertice glabro haud producto ope septorum 4 cum tubo calycino connato.

Hab. Borneo : Sarawak, *Beccari* (No. 304) ; Niah, *Haviland* and *C. Hose* (No. 233).

Folia ad 3 poll. longa, ad $1\frac{1}{2}$ poll. lata ; petiolus $\frac{3}{4}$–$1\frac{1}{4}$ poll. longus. *Pedunculus* $\frac{3}{4}$–2 poll. longus ; *pedicelli* $\frac{1}{2}$–$\frac{3}{4}$ poll. longi. *Calyx* $3\frac{1}{2}$–4 lin. longus. *Petala* 5 lin. longa.

H. Forbesii, *Stapf* (*sp. nov.*) ; partibus juve ilibus ferrugineo-furfuraceis exceptis glabra, ramis flexuosis vetustis verrucosis grosse 4-sulcatis, foliis rotundato-ellipticis basi rotundatis apice obtusis vel apiculatis 5-plinerviis, umbellis in ligno vetusto pluribus e ramis abbreviatis globoso-nodosis breviter pedunculatis paucifloris, pedicellis longis gracilibus, calyce quadrangulari-campanulato limbo subpatulari, petaiis oblongis acutis, staminibus 8 valde inæqualibus, episepalis longioribus (sterilibus ?) antheris linearibus connectivo basi producto antice bilobo lobis lineari-oblongis postice triangulari-calcarato, epi-petalis antheris a latere visis oblique lateque oblongis erostris connec-tivo basi haud producto antice bilobo lobis linearibus postice breviter calcaratis, ovario vertice glabro subplano ope septorum 8 cum tubo calycino connato.

Hab. New Guinea : Sogeri District, *Forbes* (No. 457).

Folia ad 3 poll. longa, ad 2 poll lata ; petiolus $\frac{1}{2}$–$\frac{3}{4}$ poll. longus. *Pedunculi* $\frac{1}{2}$ poll. longi ; pedicelli ad 1 poll. longi. *Calyx* 3 $3\frac{1}{2}$ lin. longi. *Petala* 3–4 lin. longi. *Antheræ* episepalæ cum connectivo $3\frac{1}{2}$ lin., epipetalæ 2 lin. longæ.

One of the species described was placed by Cogniaux in *Dissochæta*—viz. *D. quintuplinervis*—together with *D. punctulata*, Hook. fil., *D. sagittata*, Bl., and *D. Cummingii*, Naud., plants of an entirely different aspect, and no doubt typical representatives of the genus *Dissochæta*. Cogniaux's *D. quintuplinervis* differs from them in its scandent or trailing habit, the flexuose stem and the long, slender, and wavy branchlets being evidently too weak to support themselves ; in the blackish leaves, the transverse veins of which are few and obscure ; and in the truly axillary position of the inflorescences, which are generally reduced to solitary flowers. The general structure of the flowers might do for *Dissochæta*, but I do not know any species of this genus where the calyx is so distinctly obconical ; it is always more or less campanulate or ovoid, and becomes soon constricted above the

ovary after fertilisation has taken place ; and those species of *Dissochæta* at least with which Cogniaux places *D. quintuplinervis* have the long flexuose setæ which characterise most species of this genus, whilst they are very short in *D. quintuplinervis.* In fact, this species would represent a very peculiar type of *Dissochæta* if left in that genus—so peculiar, indeed, that its deviation from the remainder of the genus would be quite equivalent to the differentiation on which the genera of *Dissochæteæ* altogether rest. This alone would suffice to raise *Dissochæta quintupliformis* to the type of a new genus, and it appears so much the more justified, as there are now already three more species known which follow the same type. As to the affinity of the genus *Malanthos* (μάλη = axilla, ἄνθος = flower), I believe it lies more with *Medinilla* than with *Dissochæta.*—O. Stapf.

Fig. 1. Flower. 2. Calyx-tube and ovary, vertical section. 3. Larger, and 4. Smaller anthers. *All enlarged.*

M.S.del, Stapfianal

Hederella quintuplinervis, Stapf

Plate 2416.

HEDERELLA QUINTUPLINERVIS, *Stapf.*

Melastomaceæ. Tribe Dissochæteæ.

H. quintuplinervis, *Stapf* (*sp. nov.*); ramis (scandentibus ?) junioribus dense ferrugineo-furfuraceo-tomentosis foliis alternis, late ovatis vel ellipticis vel rotundato-ovatis basi rotundatis acutis vel breviter acuminatis 5-plinerviis, subtus ferrugineo-furfuraceis demum glabratis, supra glaberrimis sicco nigricantibus, floribus plerumque solitariis, pedunculis dense furfuraceo-tomentosis brevissimis 2–4-bracteolatis, calyce late conico-campanulato dense furfuraceo-tomentoso, petalis ovatis acutis in alabastro in conum brevem acutum contortis, staminibus 8, valde inæqualibus episepalis tantum fertilibus, antheris lanceolatis subrostratis, connectivo basi breviter producto antice bilobo lobis lanceolatis brevibus postice obscure calcarato, antheris epipetalis anguste linearibus connectivo haud producto antice minute bilobo postice minute calcarato, ovario ope septorum 8 cum tubo calycino connato vertice tumido rufo pubescente centro depresso.

Hab. Borneo : Sarawak, *Beccari* (Nos. 1802, 3274); Matang, *Haviland.*

Folia 2-3 poll. longa, $1\frac{1}{2}$–2 poll. lata ; petiolus 1 poll. longus, *Pedicelli* 3–4 lin. longi. *Calyx* 3–4 lin. longus.—O. Stapf.

Fig. 1. Calyx-tube and ovary, vertical section. 2. Hair from calyx. 3. Petal. 4. Larger, and 5. Smaller anthers. *All enlarged.*

M. Sadler lith.

Medinilla lorata, Stapf.

Plate 2417.

MEDINILLA LORATA, *Stapf*.

M. (§ **Heteroblemma**) **lorata**, *Stapf* (*spec. nov.*) ; ramis vetustis verruculosis foliatis flexuosis dense radicibus substrato adhærentibus vestitis, foliis loratis vel lineari oblongis basi longiuscule acuminatis atque in petiolum decurrentibus obtusis vel subacutis integris subcoriaceis glaberrimis 3-pli nerviis, venis transversis subtus distinctis, floribus in fasciculis ad 15-floris e ligno vetusto, pedicellis gracilibus ut calyx obconicus vel demum campanulatus truncatus edentatus minutissime rufo-furfuraceis.

Hab. Borneo : Sarawak, Kuching, *Haviland* (No. 1785).

Folia ad 1 ped. longa, ad 2 poll. lata ; petiolus 2-2½ poll. longus. *Pedicelli* 10 lin. longi. *Calyx* 2 lin. longus. *Petala* 4 lin. longa. *Antheræ* 3 lin. longæ.

See the note under *M. serpens* (pl. 2411).—O. Stapf.

Fig. 1. Calyx-tube and ovary, vertical section. 2. Petal. 3. Anther, lower figure in side view. *All enlarged.*

Plethiandra Hookeri, Stapf

Plate 2418.

PLETHIANDRA HOOKERI, *Stapf.*

P. Hookeri, *Stapf in Trans. Linn. Soc., ser.* 2, *vol. iv.* 163 ; frutex glaberrimus, foliis brevissime petiolatis crasse coriaceis quintuplinerviis late ellipticis obtusis v. retusis basi plus minus rotundatis, floribus axillaribus breviter pedicellatis 3–5-fasciculatis, calycis urceolato-campanulati limbo truncato integro, petalis 6 obovato-ellipticis acutis, staminibus 26–30, antheris linearibus basi emarginatis interdum postice obsolete calcaratis.

Hab. Borneo : Kinabalu, 6600 feet, *Haviland* (No. 1169).

Rami crassiusculi, teretes, cortice cinereo-albido. *Folia* 3–4 poll. longa, $1\frac{1}{2}$–$2\frac{1}{2}$ poll. lata, nervis 2 interioribus utrinque cum costa longe coalitis ; petiolus crassus 1–2 lin. longus. *Flores* rosei, $\frac{1}{2}$ poll. diam. ; pedicelli 2–3 lin. longi. *Ovarium* inferum, 6-loculare, vertice in medio leviter depressum ; septa tenuissima ; placentæ bifidæ, ex angulo superiore ortæ. *Bacca* (immatura) globosa, limbo calycino coronata.

To this species and *P. Motleyi*, Hook. f., on which the genus was founded, three more species may be added from Dr. Haviland's collection. They are :

1. P. rejangensis, Stapf (*sp. nov.*) ; foliis subcoriaceis petiolatis ellipticis basin acutis vel subrotundatis breviter acuminatis, 5-plinerviis venis transversis supra distinctioribus, floribus paucis fasciculatis pedicellis calyce duplo longioribus, petalis rotundato-obovatis, staminibus 25–30.

Hab. Borneo : Sarawak, Rejang, Sibu, *Haviland* (No. 545).

Folia ad 6 poll. longa, ad $2\frac{3}{4}$ poll. lata ; petiolus 1 poll. longus. *Pedicelli* ad 5 lin. longi. *Calyx et petala* $2\frac{1}{2}$ lin. longa. *Antheræ* vix 2 lin. longæ.

2. P. sessilis, *Stapf* (*sp. nov.*) ; foliis coriaceis sessilibus ellipticis utrinque obtusis 7-plinerviis (vel potius pinnatinerviis, nervis lateralibus utrinque 3, infimis plerumque tenuibus) venis transversis inconspicuis, floribus 5–6-fasciculatis pedicellis brevissimis, petalis oblongis acutis, staminibus 20.

Hab. Borneo : Sarawak river, epiphytic, *Haviland*.

Folia 4 poll. longa ad $2\frac{1}{2}$ poll. lata. Calyx vix 2 lin. longus. Petala $1\frac{1}{2}$ lin. longa. Antheræ 1 lin. longæ.

3. P. cuneata, *Stapf* (*sp. nov.*); foliis subcoriaceis petiolatis oblongo-vel elliptico-cuneatis acuminatis 3-plinerviis venis transversis inconspicuis, floribus solitariis e ramis annotinis pedicellatis, petalis late oblongis acutis, staminibus circiter 30.

Hab. Borneo : Sarawak, Selabat Rock, on the coast, *Haviland.*

Frutex 5 ped. altus. *Folia* ad 3 poll. longa, ad $1\frac{1}{2}$ poll. lata ; petiolus $\frac{1}{2}$ poll. longus. *Pedicelli* 4 lin. longi. *Calyx* 2–$2\frac{1}{2}$ lin. longus. *Petala* 3 lin. longa. *Stamina* $1\frac{1}{2}$ lin. longa.

The genus *Plethiandra* was placed in *Astronieæ* by the authors of the 'Genera Plantarum,' and subsequently by Baillon, Cogniaux, and Krasser. I have, however, pointed out in 'Trans. Linn. Soc.,' *l.c.*, that the affinity lies most distinctly with *Medinilla*, from which *Plethiandra* differs mainly in the large number of stamens. Curiously enough, Cogniaux has described a new genus, *Medinillopsis*, which he places next to *Medinilla*, and which differs, according to him, from *Medinilla* in exactly the same points. Unfortunately I have not been able to see a good specimen of *Medinillopsis*. But judging from a specimen of Beccari's in the Kew Herbarium numbered 4004, and from Cogniaux's description there cannot be any doubt that it is identical with *Plethiandra*. There is only one point of difference so far as Cogniaux's description is concerned, viz. the number of cells in the ovary. Cogniaux indicates three cells for *Medinillopsis*, whilst I find constantly six in *Plethiandra*; but the septa separating the cells are so extremely delicate that an error as to their number is quite conceivable. In a rather advanced fruit of Beccari's No. 4004 I counted, in fact, four distinct septa, the other two having been probably absorbed. The description of *Medinillopsis sessiliflora*, Cogn., moreover, agrees almost exactly with my *P. sessilis*, the only point of difference being the length of the petals.

Another specimen from Beccari's collection (No. 4049) was described by Cogniaux as *Medinilla robusta*. The one I have seen, numbered 4049, is so extremely like Cogniaux's *Medinillopsis beccariana* that it might be taken to be the same but for the very short pedicels. I have not seen flowers of it, but I feel convinced it is also a species of *Plethiandra*.—O. Stapf.

Fig. 1 Flower. 2. Petal. 3. Larger, and 4. Smaller stamens. 5. Longitudinal section of ovary. 6. Transverse section of (immature) fruit. *All enlarged.*

M.S. del, et lith.

Cyanandrium guttatum, Stapf

Plate 2419.

CYANANDRIUM GUTTATUM, *Stapf.*

Melastomaceæ. Tribe Sonerileæ.

Cyanandrium, *Stapf* (*gen. nov.*). *Flores* 5-meri. *Calycis* glaberrimi tubus turbinato-campanulatus, ultra ovarium productus; limbus truncatus, denticulis 5 remotis impositis, paulo infra marginem atque inter denticulos setarum patularum alternatim majorum serie horizontali munitus. *Petala* oblonga apiculata. *Stamina* 10 æqualia; antheræ lanceolatæ, acuminatæ, 1-porosæ, connectivo basi antice in auriculos breves producto postice exappendiculato. *Ovarium* toto ambitu calycis tubo adhærens, 5-loculare, vertice lobis quadratis minute denticulatis 5 coronatum; stylus filiformis; stigma punctatum. *Capsula* ut in Phyllagathi, sed 5-mera. *Semina* ignota.—Herbæ *acaules vel subacaules.* Folia 3 *radicalia*, *petiolata*, *cordata*, *7–9-nervia*, *discoloria*, *petiolis setosis vel villosis.* Flores *in umbellas terminales longe pedunculatas dispositi*, *pedicellati*, *ebracteati.* Antheræ *cyaneæ.*

C. guttatum, *Stapf* (*sp. nov.*); foliis late cordato-ovatis acutis eroso-denticulatis 7-nerviis supra albo- vel aureo-guttatis maculo quoque seta ornato subtus pallidis insigniter reticulatis in nervis imprimis basin versus setulosis, petiolo dense patuleque setoso-villoso, pedunculo gracili ut pedicelli et calyces, cærulescente.

Hab. Borneo: Sarawak, Saribas, *Haviland* (No. 1549).

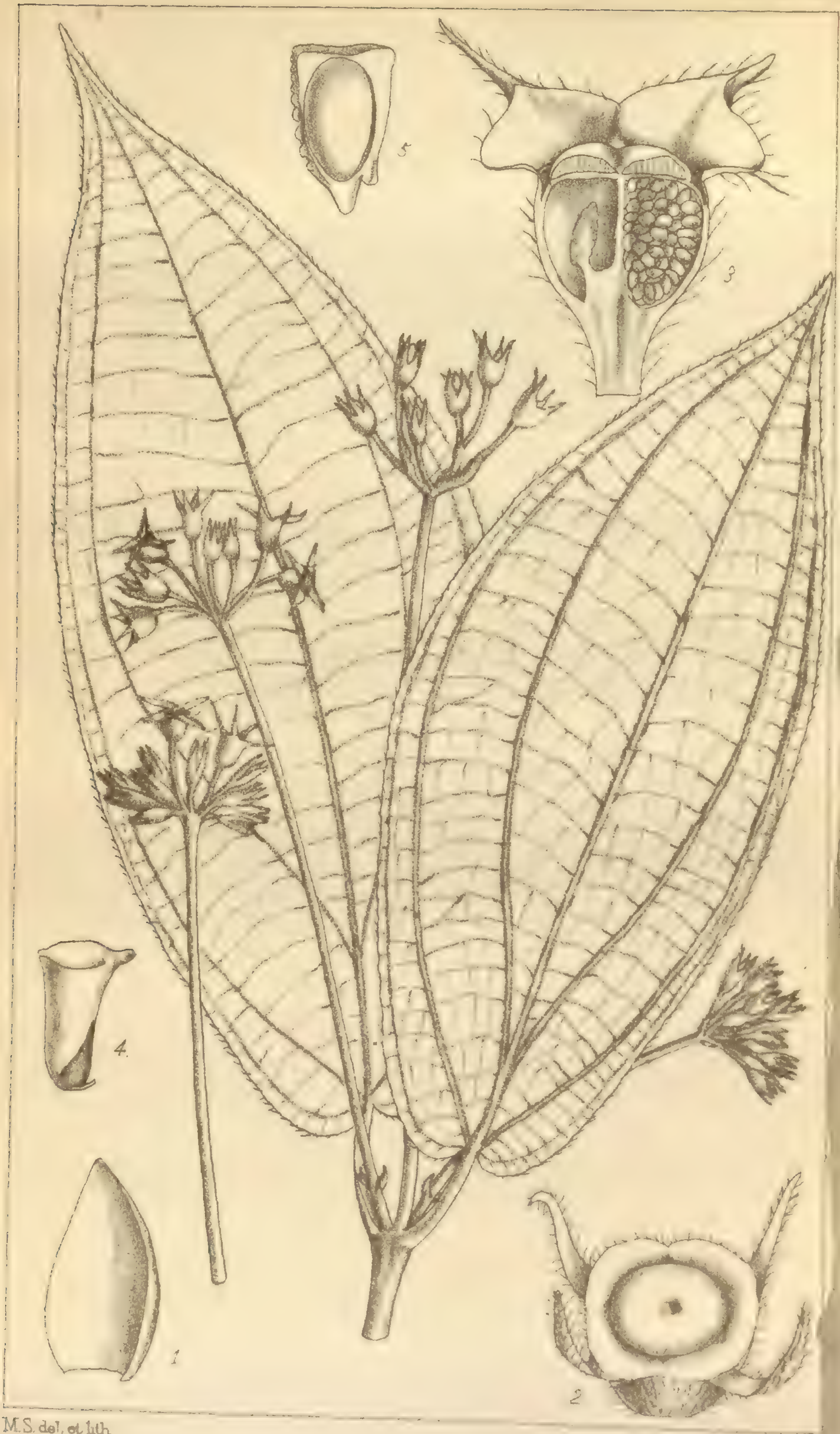
Folia 2–3¼ poll. longa, 1½–2½ poll. lata; petiolus 1½–2¼ poll. longus. *Pedunculus* 3–4½ poll. longus; pedicelli 3 lin. longi. *Calyx* 1½–2 lin. longus. *Petala* (expansa) ad 3 lin. longa. *Antheræ* 2 lin. longæ.

Another species of *Cyanandrium* may, though imperfectly known, be described as follows:

C. rufum, *Stapf* (*sp. nov.*); foliis rotundato-cordatis acutis subrepando-denticulatis 9-nerviis supra minute sparseque papillosis, subtus flavescentibus in nervis dense rufo-villosis, petiolo rufo-villoso, pedunculo (in statu maturo) subrobusto.

Hab. Borneo: Sarawak, Matang, 1600 ft., *Haviland.*

Folia 3–3½ poll. longa, 3 poll. lata; petiolus 3¼–4½ poll. longus.



M.S. del, et lith.

Pomatostoma sertuliferum, Stapf.

Plate 2420.

POMATOSTOMA SERTULIFERUM, *Stapf.*

Melastomaceæ. Tribe Oxysporeæ.

Pomatostoma, *Stapf* (*gen. nov.*) *Flores* 4-meri. *Calycis* hirsuti tubus campanulatus, lobis triangularibus acutis vel subulato-caudatis. *Petala* parva, ovato-oblonga, acuta. *Stamina* 8 æqualia, antheris e basi ovata acuminatis, 1-porosis, loculis basi distinctis, connectivo basi non producto, antice inappendiculato, postice breviter calcarato. *Ovarium* ad medium calyci adnatum, 4-loculare, vertice convexo nec appendiculato nec exsculpto, stylo longiusculo recto, stigmate punctiformi. *Capsula* vertice convexo glabro, centro lævissime depresso, umbonato, calyce superata, operculo crasso circumscisso desiliente dehiscens. *Semina* minima, obovoideo-cuneata, testa tenui, raphe angusta; embryo rectus.—Herbæ *setoso-hirsutæ, basi induratæ, vel suffrutices.* Folia *petiolata, sæpe acuminata integra vel subintegra 3–7-nervia, setoso-hirsuta vel glabrescentia.* Cymæ *pauci- vel multifloræ, longe pedunculatæ, floribus umbellatim congestis, parvis, inconspicuis.*

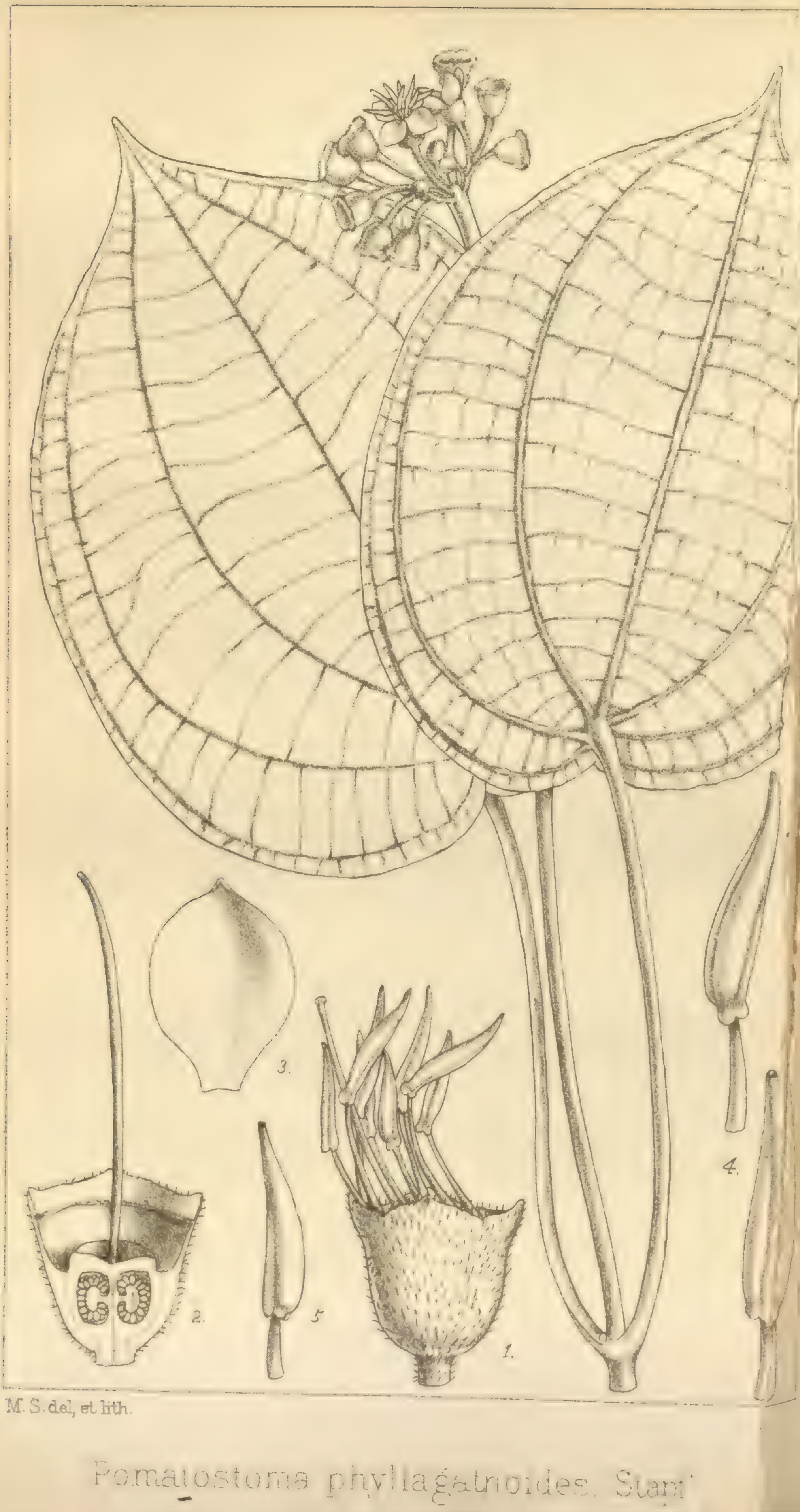
P. sertuliferum, *Stapf* (*sp. nov.*); foliis obovato-oblongis plus minusve panduriformibus basi subcordatis apice acuminatis subserrulatis 5-plinerviis supra glaberrimis subtus ad nervos strigillosis, pedunculo pedicellisque adpresse denseque setulosis, calycis adpresse setulosi lobis e basi late triangulari caudato-acuminatis. Allomorphia sertulifera, *Cogn. Melast. in D. C. Monogr. Phan.* vii. 465.

Hab. Borneo: Sarawak, *Beccari* (No. 25 et 1332, *ex Cogniaux*); on the Sarawak river on conglomerate in primæval forest, alt. 1800 feet, *Haviland*; on Mt. Matang, alt. 1800 feet, *Haviland.*

Herba 1–2 ped. alta. *Folia* 5–9 poll. longa, 2–4½ poll. lata, opposita, subæqualia; petiolus 1¼–1½ poll. longus. *Pedunculus* ad 3½ poll. longus. *Pedicelli* 3–4 lin. longi. *Calycis* tubus 1½ lin. longus; lobi ultra lineam longi.

Another species of the same genus may be described as follows:

P. angustifolium, *Stapf* (*sp. nov.*); caule patule setuloso foliis lanceolato-oblongis basi subcordatis subacuminatis integris 3-plinerviis supra in costa subtus in nervis et in margine patule setulosis, petiolo brevi setuloso, pedunculo gracili patule setoso, umbella pauciflora, pedicellis gracilibus, calycis patule setulosi lobis latissime ovatis subacutis.



M. S. del, et lith.

Pomatostoma phyllagathoides. Stam

Plate 2421.

POMATOSTOMA PHYLLAGATHOIDES, *Stapf.*

Melastomaceæ. Tribe Oxysporeæ.

P. phyllagathoides, *Stapf (spec. nov.)* ; herba, ut videtur, monocarpica, foliis oppositis superioribus 6 subapice caulis congestis late rotundato-ellipticis breviter cordatis breviter abrupteque acuminatis vel obtusis 7-plinerviis supra glabris minutissime granulatis subtus in nervis venisque tenuiter strigillosis cæterum sub lente valido minute hirtellis, pedunculo pedicellisque adpresse setulosis, calycis adpresse setulosi lobis obscuris latissimis obtusisque.

Hab. Borneo : Sarawak, Bangsitu, on the ground in old jungle, on sandstone, *Haviland.*

Herba ad 1 ped. alta. *Folia* 4–7 poll. longa, 3–5 poll. lata ; petiolus 3–4½ poll. longus. *Pedunculus* 7 poll. longus. *Pedicelli* 3 lin. longi. *Calyx* 2 lin. longus. *Antheræ* ad 1–2 lin. longæ.

2. **P. inæqualis,** *Stapf (nov. sp.)* ; herba, ut videtur, monocarpica, foliis oppositis paribus æqualiter distantibus summis valde inæqualibus oblongo- vel obovato-ellipticis basi subcordato-rotundatis acuminatis sub-7-plinerviis utrinque minute sparseque papilloso-hirtellis supra mox glabratis, petiolo et pedunculo obscure minuteque hirtellis, pedicellis dense adpresseque setulosis, calycis breviter setulosi lobis brevissimis latissimis obtusis, petalis albis.

Hab. Borneo, Sarawak, Mt. Brongoh, near Tegura, *Haviland* (No. 2005).

Herba 1 ped. alta. *Folia* ad 6 poll. longa, ad 3½ poll. lata ; petiolus 2 poll. longus. *Pedunculi* terminales et laterales 2½–3½ poll. longi. *Calyx* 1½–1¾ poll. longus.—O. Stapf.

Fig. 1. Calyx and stamens. 2. Vertical section of calyx and ovary. 3. Petal. 4. Larger, and 5. Smaller anthers. *All enlarged.*

M.S. del, et lith.

Ormosia fordiana, Oliv

Plate 2422.

ORMOSIA FORDIANA, *Oliv.*

Leguminosæ. Tribe Sophoreæ.

O. fordiana, *Oliv. (sp. nov.)*; arbor ramulis ultimis floriferis tomentoso-puberulis, foliis imparipinnatis sæpius 7–9-foliolatis foliolis petiolulatis oblanceolatis ovalibusve acuminatis basi cuneatis supra glabris subtus leviter vel obsolete sericeis, floribus majusculis racemosis racemis in paniculis terminalibus laxis ferrugineo-pubescentibus aggregatis, pedicellis apice bibracteolatis bracteolis parvis subulatis, calycis profunde 5-fidi tubo breviter turbinato segmentis oblongo-lanceolatis obtusiusculis 2 posticis altius connatis, petalis calycem superantibus, ovario hirsuto, stylo apice involuto, ovulis 3–4.

Hab. China: Prov. Kwang Tung, North-West River. *Native Collector, comm. C. Ford* (No. 231).

Folia 6–11 poll. longa; stipulæ obsoletæ; foliola superiora 4–6 poll. longa, $1\frac{1}{4}$–$1\frac{3}{4}$ (–2) poll. lata; petiolulus $\frac{1}{4}$–$\frac{1}{3}$ poll. longus. *Racemi* laxiusculi, 3–6 poll. longi; bracteæ lanceolatæ 1–2 lin. longæ; pedicelli 4–6 lin. longi. *Flores* $\frac{3}{4}$–1 poll. diam.; calyx 6–8 lin. longus; vexillum orbiculare, brevissime unguiculatum, carinæ petala alis similia, oblique oblongo-obovata, obtusa, unguiculata. *Legumen* non vidi.

Very distinct from the species hitherto described from China, and belonging to the macrocalycine section of the genus.—D. Oliver.

Fig. 1. Flower laid open, the petals removed. 2. Vexillum. 3. and 4. Wing- and keel-petals. 5. Pistil. 6. Longitudinal section of ovary. *All enlarged.*

M.S.del, et lith.

Aloe minima, Baker

Plate 2423.

ALOE MINIMA, *Baker.*

Liliaceæ. Tribe Aloineæ.

A. minima, *Baker in Kew Bull.* 1895; acaulis, foliis suberectis multifariis anguste linearibus basi valde dilatatis facie canaliculatis copiose albido-maculatis aculeis marginalibus crebris minutis patulis interdum leviter uncinatis albidis, scapo simplici bracteis vacuis plurimis apice abrupte attenuatis prædito, floribus dense racemosis, pedicellis adscendentibus bracteis ovato-acuminatis subæquilongis, perianthio cylindrico pallide miniato, tubo brevissimo segmentis ovali-oblongis obtusis 3-nerviis nervis in segmentis interioribus arcte parallelis, genitalibus inclusis, antheris late oblongo-ellipticis, ovario lanceolato-oblongo.

Hab. Natal: 'Solitary among grass, South Downs,' *M. S. Evans* (No. 409).

Folia 5–8 poll. longa, supra basin $1\frac{1}{2}$ lin. lata. *Scapus* 6–12 poll. longa. *Pedicelli* 4–6 lin. longi. *Perianthium* c. 5 lin. longum.

Allied to *Aloë Cooperi*, Baker, and *A. Kraussii*, Baker.—J. G. Baker.

Fig. 1. Portion of leaf-margin with aculei. 2. Flower. 3 and 4. Perianth-segments with stamens adnate to base. 5. Anther, back view. 6. Pistil. *All enlarged.*

M S. del, et lith

Neogoezia gracilipes, Hemsl.

Plate 2424.

NEOGŒZIA GRACILIPES, *Hemsl.*

Umbelliferæ. Tribe Smyrneæ.

Neogœzia, *Hemsl. in Kew Bull.*, 1894, p. 354 (generis char. hic emend. et auct.); *calycis* dentes prominentes, interdum inæquales, persistentes, sæpius colorati. *Petala* lata, fere plana, integra. *Discus* conicus, interdum purpureo coloratus. *Fructus* didymus subcordiformis, a latere plus minusve compressus vel vix compressus, ad commissuram sulcatus; carpella fere teretia, basi leviter gibbosa; juga primaria tenuia vel prominentia; vittæ tenuissimæ, ad valleculas 3–5, ad commissuram 4–6; carpophorum demum bifidum vel bipartitum. *Semen* subteres, facie profunde excavatum.— Herbæ *mexicanæ glabræ, perennes vel biennes, scaposæ, radicibus fasciculato-tuberosis, tuberibus cylindricis.* Scapi *solitarii vel plures.* Folia *pinnatim dissecta, omnia radicalia, petiolis confertis longe angusteque inter se vaginantibus.* Umbellæ *simplices, in scapo gracili solitariæ, pedicellis eximie filiformibus.* Involucri *bracteæ numerosæ, angustæ vel angustissimæ, integræ paucidentatæ vel paucilobulatæ.* Flores *albi vel flavi, polygami vel unisexuales, nunc in umbella omnes aut feminei aut masculini, nunc exteriores masculini interiores feminei.*

N. gracilipes, *Hemsl. in Kew Bull.*, 1894, p. 355, absque descriptione; Oreomyrrhis gracilipes, *Hemsl. Diag. Pl. Nov. i. p.* 16, *et in Biol. Centr. Am., Bot.* i. p. 567, t. 33 et t. 34 figg. 6–8 (descriptio hic emendata); foliis variabilibus longe petiolatis pinnatis angustis oblongis, rachi crassiuscula, pinnis sessilibus oppositis fere obtegentibus vel distantibus tenuibus bi- vel tri pinnatisectis segmentis angustis ultimis parvis subcuneatis apiculatis, petioli parte supra vaginam sæpe brevissima, scapo sæpius solitario? erecto recto leviter sulcato vel striato, involucri bracteis angustissimis integris vel pauci-lobulatis quam pedicelli multo brevioribus, pedicellis numerosis elongatis fere capillaribus, calycis dentibus parvis sæpe inæqualibus, jugis primariis sat prominentibus, stylis brevibus recurvis.

Hab. South Mexico: slopes of the Pacific side of the Cordillera of Oaxaca, *Galeotti* (No. 2753); without locality, *Sallé*; Santa Inez del Monte, Oaxaca, at 8500 feet, *Pringle* (No. 4997); foot-hills west of valley of Oaxaca, between 5500 and 7500 feet altitude, *Nelson* (No. 1418); mountain sides near Tlapancingo, Oaxaca, 6000 to 8000 feet, *Nelson* (No. 2088).

Tubera 3–4 poll. longa. *Scapi* usque ad 4–5 ped alti, sæpius breviores. *Folia* absque petiolo interdum 18–24 poll. longa, pinnis distantibus latioribus minus dissectis $1\frac{1}{2}$–2 poll. longis, sed sæpius 6–12 poll. longis, pinnis confertis magis dissectis, segmentis angustioribus acutioribus. *Petiolorum* pars vaginans $2\frac{1}{2}$–5 poll. longa, pars libera 0–3 poll. longa. *Involucri bracteæ* 6–9 lin. longæ. *Pedicelli* 1–3 poll. longi. *Fructus* maximus vix 3 lin. longus.

We are indebted to the courtesy of Mr. S. P. Langley, Secretary of the Smithsonian Institution, and the good offices of Mr. J. N. Rose, Assistant Botanist in the United States National Herbarium, for the loan of Pringle and Nelson's specimens of *Neogæzia*, from which this and the following plate were prepared.

Mr. Rose also communicated the following particulars of the dimensions &c. of *N. gracilipes*, as well as Mr. C. G. Pringle's note on the locality it inhabits :

'Stems from a cluster of deep-seated tuberous roots as in *N. minor*, thirty to sixty inches high ; length of petiole above the sheath very variable, sometimes nearly wanting, often three inches long. Leaflets generally close together along the rachis, sometimes much separated, occasionally three inches or more apart. Involucels rarely short and entire, but generally all, or nearly all, 3- to 5-toothed and six to nine lines long. Pedicels very numerous, in fruit one and a half to three inches long. Fruit rather variable, two to three lines long, nearly orbicular to ovate, slightly cordate at the base.'

Mr. Pringle's note follows :

'As respects *Neogæzia* No. 4997, it was found first by Mr. Nelson, then by myself more widely scattered, on a range of mountains twenty-five miles west of Oaxaca, which range has an altitude of 9000 feet, and may be regarded as the margin of the mountainous track called the Mixteca Alta, over which runs, in a zigzag course, the continental divide. The plant is abundant on somewhat dry ridges and slopes of these mountains at an elevation of 8000 feet, amongst a sparse growth of oaks and pines. Frankly it is my opinion that there is but one species there, though a variable one, as the conditions, fertility, and humidity of soil and exposure to open sunlight vary. The specimens were all gathered on a tract two or three miles in extent ; the fruits which lie in sheets with flowers (they are scarcely mature enough) were gathered at the same time with the flowers, October 19 ; those in the sheets by themselves with only a few inches of the peduncle attached were taken on a later visit to the same field, October 27.'—W. Botting Hemsley.

Fig. 1. Flower. 2. Fruit, the mericarps separated, showing the bifid carpophore. 3 Transverse section of mericarp. *All enlarged.*

M S.del, et lith.

Neogoezia minor, Hemsl.

Plate 2425.

NEOGŒZIA MINOR, *Hemsl.*

Umbelliferæ. Tribe Smyrneæ.

Neogœzia minor, *Hemsl. in Kew Bull.* 1894, p. 355; (descriptio hic emendata) tuberibus elongatis cylindricis, scapis pluribus interdum usque ad 12 erectis vel fructiferis sæpe deflexis, foliis longe petiolatis pinnatis, rachi crassiuscula, pinnis oppositis sessilibus nunc confertissimis deorsum sese obtegentibus nunc plus minusve sejunctis circumscriptione ovatis sæpius trilobatis lobis acute dentatis, petiolis inter se vaginantibus supra vaginam vix vel haud productis, involucri bracteis minutis subulatis, pedicellis numerosis gracilibus angustissime angulatis, calycis dentibus minutis acutis, petalis ovato-oblongis apice obtusis vel rotundatis, fructu late cordiformi, jugis primariis haud prominentibus.

Hab. South Mexico: mountains above Oaxaca, 9000 to 10,500 ft. altitude, *Pringle* (No. 4725); Cerro San Felipe, Oaxaca, *Nelson* (No. 1418 A.).

Tubera 2–3 poll. longa. *Scapi* circiter 6–12 poll. alti. *Folia* absque petiolo $2\frac{1}{2}$–5 poll. longa, medio 6–9 lin. lata, petiolis vaginantibus $1\frac{1}{2}$–$3\frac{1}{2}$ poll. longis. *Pedicelli* 4–8 lin. longi. *Fructus* latior quam longus, circiter $1\frac{1}{2}$ lin. latus.

Mr. Rose communicated the following interesting note on this species, which he received from Mr. C. G. Pringle:

'*Neogœzia minor*, Hemsley, presents a rosette of leaves which lie close upon the surface of the soil (black humus) in little meadows and flats along the creeks of the Sierra de San Felipe, 10,000 ft. elevation. This mountain chain is the continental divide, at whose base on the Pacific side, and some ten miles distant from, and 5,000 ft. below its summit, is located the city of Oaxaca. The flowering peduncles of this plant at anthesis rise 1 to 4 or 5 inches above the leaves, but in fruit some of them recline on the ground, while others rise quite erect.'—W. Botting Hemsley.

Fig. 1. Male flower. 2. Calyx and ovary of pistillate flower. 3. Fruit, the mericarps separating. 4. Transverse section of mericarp. *All enlarged.*

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M. S del et lith

Afromendoncia lindaviana, Gilg.

Plate 2426.

AFROMENDONCIA LINDAVIANA, *Gilg.*

Acanthaceæ. Tribe Thunbergieæ.

A. lindaviana, *Gilg in Engler, Bot. Jahrb.* xvii. (1893), 112; frutex alte scandens caule florifero sulcato nonnunquam torto, ramulis foliiferis gracilibus subteretibus glabris, foliis petiolatis ovali-oblongis v. anguste ellipticis obtusiuscule acuminatis, nervis primariis lateralibus utrinque 3–4 incurvatim confluentibus tenuiter coriaceis glabris subtus (in sicco) rubescentibus, floribus pedicellatis in axillis foliorum delapsorum fasciculatis, alabastris bracteolatis ellipsoideis apiculatis, calycis cupuliformis ovario dimidio brevioris margine truncato late undulato-lobato, corollæ tubo bracteolas paulo superante limbi bilabiati segmentis fere æquilongis obovato-rotundatis patentibus.

Hab. W. Tropical Africa: Corisco Bay, *Mann* (No. 1849); Sibange Farm on the Gaboon, *Soyaux* (No. 156).

Rami floriferi 3–6 lin. diam. *Folia* 3–4½ poll. longa, 1–2 poll. lata; petioli 6–9 lin. longi. *Alabastra* etiam inaperta 3–4 lin. longa; pedicelli 6–9 lin. longi. *Flores* ½ poll. diam. *Ovarium* ovoideum, glabrum, uniloculare, biovulatum, basi disco carnosulo circumdatum; ovula collateralia; stylus bracteolas superans, apicem versus leviter dilatatus; stigma brevissime 2-lobulatum.

This plant was described, but never published, by the late Dr. T. Anderson as a new species of *Thunbergia*, and I am not sure the wiser course would not be to leave it in that genus or, rather, in *Mendoncia*, in which suppression of one cell of the ovary occurs; but as Dr. Gilg has founded a new genus for it, and thinks the fruit may be capsular—not drupaceous, as in *Mendoncia*—rather than give a new name to it, I prefer to leave it with Dr. Gilg. Dr. Lindau (*l. c.* p. 113) calls attention to the abnormal structure of the stem, 'in many respects recalling that of Bignoniaceæ,' of which he proposes to give a separate account.—D. Oliver.

Fig. 1. Bud, one of the enclosing bracteoles removed. 2. Corolla laid open. 3. Anther, back and front. 4. Pistil, with disk and calyx. 5. Longitudinal, and 6, transverse section of ovary. *All enlarged.*

M.S.del. et lith

Afromendoncia phytocrenoides, Gilg.

Plate 2427.

AFROMENDONCIA PHYTOCRENOIDES, *Gilg.*

Acanthaceæ. Tribe Thunbergieæ.

A. phytocrenoides, *Gilg in Engler, Bot. Jahrb.* xvii. 112 ; scandens, ramis foliiferis novellis hirsuto-pilosis mox glabratis, foliis amplis subcoriaceis petiolatis rotundatis v. late ellipticis breviter apiculatis basi in foliis latioribus leviter cordatis supra glabratis subtus stellato-hirsutis et in costa plus minus setuloso-pilosis, nervis lateralibus incurvis utrinque 5–7, floribus axillaribus, fasciculis 2-4-floris petiolo subæquilongis, bracteolis ovatis abrupte cuspidatis 3–5-nerviis extus longe hirsuto-pilosis intus glabris, calyce brevissimo, corollæ tubo bracteolas subæquante, limbo bilabiato tubo 3–4-plo breviore, lobis obovato-rotundatis.

Hab. W. Tropical Africa : River Muni, *Mann* (No. 1839).

Frutex alte scandens (30 ped. *fide Mann*). *Folia* tenuiter coriacea, 4–7 poll. longa, 3–4½ poll. lata ; petiolus 1-1⅓ poll. longus. *Pedicelli* 3-6 lin. longi. *Bracteolæ* ¾–1¼ poll. longæ, cum apiculo 2 lin. longo terminatæ. *Corolla* 1–1½ poll. longa. *Antheræ* 4 lin. longæ, loculis basi leviter inæqualibus. *Discus* crasse carnosus, ovario compressiusculo 1-loculari dimidio brevior.

So very different in facies from *A. lindaviana* as to deserve a separate plate. The flowers, moreover, are from the axils of attached leaves.—D. Oliver.

Fig. 1. Pistil, with disk and calyx. 2. Corolla laid open. 3. Anther. 4. Vertical section of ovary. *All enlarged.*

M. S. del, et lith.

Columnea filipes, Oliv

Plate 2428.

COLUMNEA FILIPES, *Oliv.*

Gesneraceæ. Subtribe Columneeæ.

C. (§ **Ortholoma**) **filipes,** *Oliv.* (*sp. nov.*) ; fruticosa, epiphytica, sericea, foliis valde disparibus majoribus dependentibus elongatis leviter falcatis lineari- v. oblongo-lanceolatis sensim acuminatis breviter petiolatis aureo tinctis, floribus axillaribus solitariis longe graciliterque pedunculatis, calycis 5-partiti segmentis anguste linearibus acuminatis sericeis, corollæ purpureo-puniceæ tubo ventricoso laxe piiosulo basi geniculatim gibboso calyce subduplo longiore, labiis subæquilongis segmentis anguste lineari-lanceolatis acuminatis tubo paulo brevioribus, antheris quadratim cohærentibus.

Hab. Colombia : Prov. Antioquia, 7500 ft. alt., *Kalbreyer.*

Folia adpresse sericea 5–8 poll. longa, 6–9 lin. lata ; petiolus 2–3 lin. longus ; folia minora rudimentaria. *Pedunculi* $4\frac{1}{2}$–6 poll. longi. *Calyx* 1–$1\frac{1}{3}$ poll. longus. *Corolla* 3 poll. longa.

For excellent specimens of this fine species, which have rested for some years amongst our undetermined *Gesneraceæ*, we are indebted to Messrs. Veitch, for whom it was collected by Mr. Kalbreyer in 1880. It is clearly allied to *C. acuminata*, Benth., differing in the much narrower acuminate leaves, long narrow segments of the corolla-limb, and the conspicuous obliquity of the base of the tube of the corolla.—D. Oliver.

Fig. 1. Stamens. 2. Pistil and unilateral disk. *Enlarged.*

M.S. del,et lith

Arracacia ? filiformis, Coult & Rose

Plate 2429.

ARRACACIA? FILIFORMIS, *Coult. & Rose.*

Umbelliferæ. Tribe Ammineæ.

A.? filiformis, *Coulter & Rose* (*sp. nov.*); herba acaulescens glaberrima, foliis longe et graciliter petiolatis bi- tri-ternatipartitis segmentis angustissime linearibus acutis integris v. apicem versus sæpe 2–3-dentatis, scapo erecto folia nonnunquam superante, radiis rigidis adscendentibus inæquilongis exinvolucratis, involucellorum bracteis sæpius ternis anguste linearibus integris dentatis v. trifidis floribus multo longioribus, pedicellis brevibus fructui subæquilongis, cremocarpiis ovato-oblongis lateraliter leviter compressis mericarpiis purpurascentibus jugis 5 prominulis stramineis, vittis sæpius ad sulcos solitariis, seminibus subteretibus facie sulcatis dorso lævibus.—*Contrib. U.S. Nat. Herb.* iii. 296.

Hab. Mexico: Sierra de San Felipe, Oaxaca, on rocky ridges, 10,500 ft. alt., *Pringle* (No. 4714); at 9500–11,000 ft., *Nelson* (No. 1088); summit of Mt. Zempoaltepec, alt. 11,400 ft., *Nelson* (No. 621).

Folia, cum petiolo, 4–9 poll. longa. *Scapus* $2\frac{1}{2}$–7 poll. longus; radii longiores 1–$2\frac{1}{4}$ poll. longi. *Flores* atro-purpurascentes. *Bracteæ* involucellorum 6–9 lin. longæ. *Fructus* $1\frac{1}{2}$–2 lin. longus; carpophorum bipartitum; stylopodia conica.—J. N. Rose.

Whatever may be finally determined as to the limitation of the genus *Arracacia*, this plant, of which excellent specimens, together with a description, have been placed at our disposal for the *Icones Plantarum* by Mr. S. P. Langley, Secretary of the Smithsonian Institution, through Dr. Rose, of the U.S. National Herbarium, Washington, would seem to be clearly a congener of *A. mariana*, S. Wats. in *Proc. Amer. Acad.* xxvi. 136.—D. Oliver.

Fig. 1. Male flower. 2. Petal. 3. Perfect flower, petals and stamens fallen. 4. Cremocarp, showing carpophore. 5. Commissural face of a mericarp. 6. Transverse section of mericarp. *All enlarged.*

M S. del, et lith.

Santalum fernandezianum, F. Phil.

Plate 2430.

SANTALUM FERNANDEZIANUM, *F. Phil.*

Santalaceæ.

S. fernandezianum, *F. Philippi in Bot. Abhandl. Leipzig*, 1893, *p.* 3, *tab. i.* (Reprint from *Anales del Mus. Nacional de Chile*); arbor glabra, foliis sæpissime oppositis petiolatis ellipticis oblongo- v. obovato-ellipticis late acutatis obtusisve basi in petiolum cuneatim angustatis, floribus parvis breviter pedicellatis in cymulas breviter pedunculatas paniculatas foliis breviores aggregatis, perianthii turbinati glaucescentis segmentis 4 late ovato-deltoideis intus hirto-papillosis v. pone filamenta brevissima pilis paucis longioribus instructis, antheris sub-didymis, disco inter stamina in lobos carnosulos rotundatos obtusos producto, stylo breviter conico, ovula 2 (v. 3) dependentia.

Hab. Juan Fernandez: *Flühmann, Söhrens.*

Folia tenuiter coriacea, opaca, subtus pallidiora, $1\frac{1}{3}$–2 poll. longa, 7–10 lin. lata; petioli $1\frac{1}{2}$–$2\frac{1}{2}$ lin. longi. *Paniculæ* 6–9 lin. longæ atque latæ; pedicelli tubo perianthii æquilongi.

In the *Kew Bulletin*, 1894, p. 110, an interesting account is given of the sandalwood of Juan Fernandez, which C. Gay in his *Flora Chilena*, v. 326, referred to *S. album*, L., and which, on some unauthenticated authority, he stated had all perished, although previously abundant in the island. Thanks to the persevering inquiries of Mr. F. Philippi, following up the discovery of twigs of sandalwood amongst some fuel supplied by the islanders to the celebrated Chilian warship 'Esmeralda,' he has now made it clear that the Juan Fernandez sandalwood is afforded by a previously undescribed species of *Santalum*, which he has figured as above cited, and of which excellent specimens have been transmitted by him to the Kew Herbarium. It is quite distinct from *S. album*, as also from any other species in this Herbarium.—D. Oliver.

Fig. 1. Flower. 2. Same laid open, showing the lobed adnate disk. 3. Stamen, showing back and front views of anther. 4. Vertical section of ovary. *All enlarged.*

M. S. del, et lith

Bentia fruticulosa, Rolfe.

Plate 2431.

BENTIA FRUTICULOSA, *Rolfe.*

Acanthaceæ.

B. fruticulosa, *Rolfe in Kew Bulletin*, 1894, p. 338; frutex 2–3-pedalis, ramis teretibus divaricatis albidis novellis cano-puberulis, foliis parvis carnosulis spathulatis oblanceolatisve obtusis sæpe in axillis fasciculatis basi in petiolum brevem angustatis puberulis, floribus majusculis spicatis, spicis terminalibus brevibus plurifloris, bracteis laxis dilatatis albido-marginatis, calycis a basi 5-partiti segmentis oblanceolato-linearibus subæquilongis acutis 1–4 supra medium leviter dilatatis margine scariosis albidis, corolla calyce 3-plo longiore subventricosa fere ad medium bilabiata, labio superiore integro inferiore breviter 3-dentato lobulo centrali emarginato extimis paullo latiore, staminibus anticis 2 tantum evolutis, antheris 2-locularibus loculis discretis altero altius affixo basi vix aut obscure mucronatis altero inferiore conspicue mucronato, ovario ovoideo hirto, ovulis in quoque loculo geminatis superpositis adscendentibus.

Hab. South Arabia: Hadramaut, near Gambla, 1000 ft. alt., *Lunt* (*Mr. Bent's Expedition*).

Folia 3–6 lin. longa. *Spicæ* 1–2 poll. longæ. *Flores* $\frac{3}{4}$–1 poll. longi.

Very different in habit from any species of the genera to which its staminal structure allies it, and having the margined bracts of *Rungia*. For the remarks of Mr. Rolfe and of Dr. Lindau on its affinity see the page cited above in the *Kew Bulletin*. A curious concave fleshy emergence projects into the tube about the middle opposite to the median line of the lower lip; and the position of the lateral undeveloped stamens is strongly marked by intruded plaits in the tube under the upper lip. The flowers are white with feathered veining in reddish-brown on the lower lip.—D. Oliver.

Fig. 1. Bract. 2. Bracteole and calyx, with pistil. 3. Corolla laid open. 4. Anther, back and front. 5. Vertical section of ovary. *All enlarged.*

M.S. del. et lith.

Acridocarpus orientalis, Juss.

Plate 2432.

ACRIDOCARPUS ORIENTALIS, *Juss.*

Malpighiaceæ.

A. orientalis, *A. Juss. Monogr. Malpigh.* 234; arbuscula, ramulis nodosis novellis ferrugineo-tomentosis, foliis ovali- v. oblanceolato-oblongis acutiusculis v. obtusis mucronulatis basi sæpius cuneatis junioribus tomentosis mox supra glabrescentibus petiolatis, racemis rufo-tomentosis tempore florifero corymbosim contractis, bracteis brevibus obovatis atque pedicellis calycibusque dense tomentosis, sepalis ovatis v. ellipticis obtusis, petalis breviter unguiculatis late ellipticis ovato-ellipticis v. rotundatis margine plus minus fimbriatis, antheris oblongis obscure breviterque apiculatis, ovario hirsuto, samaris evolutis sæpius solitariis oblique obovatis margine antico leviter postico conspicue curvato venis prominulis flabellatim decurvis.

Hab. Eastern Arabia: Mascat, *Aucher-Eloy* (No. 4294); at the foot of the Dhofar Mountains, *Bent* (No. 118).

Folia $2\frac{1}{2}$–$3\frac{1}{2}$ poll. longa, 10–14 lin. lata; petiolus 3 lin. longus.

Mr. Bent's specimens precisely correspond to Jussieu's type specimen, and as they are in ripe fruit as well as flower enable me to determine that the Socotran plant identified with it by Professor Bayley Balfour is specifically distinct; a figure of the latter from Professor Balfour's and Dr. Schweinfurth's specimens is given in the following plate. Ad. Jussieu, speaking of the sepals, says: '*una aut altera in margine glandula minuta rubente impressa.*' Smaller glands are liable to be concealed by the indumentum, but I do not find all the sepals with basal glands. The fruit of *A. orientalis* was unknown to Ad. Jussieu.
D. Oliver.

Fig. 1. Flower, the petals removed. 2. Petal. 3. Stamens. 4. Pistil, the ovary in vertical section. *All enlarged.*

M. S. del. et lith.

Acridocarpus socotranus, Oliv.

Plate 2433.

ACRIDOCARPUS SOCOTRANUS, *Oliv.*

Malpighiaceæ.

A. socotranus, *Oliv.*; arbuscula *A. orientali* affinis, differt foliis obovatis v. obovato-ellipticis obtusissimis v. apice rotundatis haud mucronatis mox utrinque fere glabris supra nitentibus, bracteis subulatis, sepalis parce pilosulis glabratisve, samaris sæpissime ternis quam in *A. orientali* brevioribus cum ala oblique- v. cuneatim-oblonga v. subquadrata.

Hab. Socotra, *Nimmo*; *Bayley Balfour* (No. 272); *Schweinfurth* (No. 434).

Folia in ramulis floriferis conspicue nervosis $1\frac{1}{2}$–$2\frac{1}{2}$ poll. longa. *Racemi* evoluti 3–7 poll. longi.

Professor Balfour finds 'all the sepals invariably "in margine glandula minuta rubente impressa."' See his remarks in his *Botany of Socotra*, pp. 41–42, where this plant is referred to *A. orientalis*, of which no fruiting specimens were accessible to him at that time.—D. Oliver.

Fig. 1. Flower, the petals removed. 2. Petal. 3. Anther, front and side views. 4. Pistil, anterior style removed. 5. Vertical section of a carpel. 6. Embryo. *All enlarged.*

M. S. del. et lith.

Inula grantioides, Boiss.

Plate 2434.

INULA GRANTIOIDES, *Boiss.*

Compositæ. Tribe Inuloideæ.

I. grantioides, *Boiss. Diag. Ser. ii. No.* 3, *p.* 14; fruticosa tota indumento crispulo-papilloso viscidulo obsita, ramis foliosissimis, foliis carnosulis spathulato linearibus integris v. irregulariter parce et obtuse dentatis obtusis, capitulis majusculis terminalibus solitariis, involucris basi 6–10-bracteatis, bracteis herbaceis spathulatis obtusis discum subæquantibus, squamis involucri propriis interioribus linearibus acutis, ovariis c. 10-sulcatis setulosis, pappi duplicis setis exterioribus paucis brevissimis interioribus barbellatis corollæ fere æquilongis.—*Fl. Orient.* iii. 195; *Hook. f. Fl. Brit. Ind.* iii. 296; I. cutchica, *Clarke*, *Comp. Ind.* 126.

Hab. Scind, *Stocks*; Waziristan, *Stewart*; Eastern Arabia, Dhofar Mountains, *Bent* (No. 81).

Folia $\frac{3}{4}$–$1\frac{1}{2}$ poll. longa, 1–3 lin. lata. *Capitula* $\frac{3}{4}$–1 poll. diam.

I owe the identification of this interesting plant to Mr. C. B. Clarke's kindness, never guessing the anthers, as correctly represented on the plate by Miss Smith from the Arabian plant, could belong to an *Inula*. One or two at least of the species referred to the genus *Grantia* must, I think, be congeners of this plant.—D. Oliver.

Fig. 1. Ray-floret. 2. Setæ of pappus. 3. Disk-floret. 4. Anthers. 5. Apex of style. 6. Achene with pappus. *All enlarged.*

M.S.del et lith.

Blepharispermum hirtum, Oliv.

Plate 2435.

BLEPHARISPERMUM HIRTUM, *Oliv.*

Compositæ. Tribe Inuloideæ.

B. hirtum, *Oliv.* (*sp. nov.*) ; frutex inermis, foliis petiolatis ellipticis v. ovato-ellipticis obtusis tomentellis, capitulorum glomerulis pedunculatis solitariis folia vix superantibus globosis, capitulis 4-floris, involucri bracteis 4 decussatim oppositis obovato-cuneatis, floribus 2 exterioribus femineis ; fl. ♀ ovario nigrescente obovato-elliptico setuloso-ciliato, corolla tubulosa ovario æquilonga ore denticulata ; fl. ☿ (♂) breviter stipitatis, involucri squamis conduplicatis flores amplectentibus, pappo paleaceo, paleis ovario sterili longioribus linearibus.

Hab. S. E. Arabia : Dhofar Mountains, Wadi Derbat, *Bent* (No. 122).

Frutex 10-pedalis. *Folia* 1–2½ poll. longa, ¾–1½ poll. lata ; petiolus 1½–4 lin. longus. *Glomeruli* 9 lin. diam. ; pedunculi ½–2 poll. longi. *Bracteæ* receptaculi communis eis involucri exterioribus conformes, cuneato-obovatæ, concavæ, subcarinatæ ; bracteæ 2 interiores involucri ovali-oblongæ, mucronatæ, basi cum stipite fl. ☿ confluentes. *Antheræ* basi breviter sagittatæ, per paria connatæ.

Very distinct from any species in the Kew Herbarium, and exceptional in the genus in its tomentose leaves and younger extremities.—D. Oliver.

Fig. 1. Detached capitulum, laid open. 2. Male floret and subtending scale. 3. Paleæ of pappus. 4. Anthers. 5. Apex of style. *All enlarged.*

M S. del, et lith

Trichodesma cardiosepalum, Oliv.

Plate 2436.

TRICHODESMA CARDIOSEPALUM, *Oliv.*

Boragineæ.

T. (§ **Friederichsthalia**) **cardiosepalum,** *Oliv.* (*sp. nov.*) ; herba suffrutescens ramis pilis brevibus crispatis albidis cum setulis albis basi inconspicue tuberculatis intermixtis hirtis, foliis suboppositis breviter petiolatis oblongo- v. ovato-lanceolatis obtusiusculis utrinque adpresse setulosis, racemis 3–5-floris pedicellis decurvis, sepalis ovatis etiam in alabastris basi conspicue cordatis breviter graciliterque acuminatis, corollæ lobis subreniformibus apice subito graciliter acuminatis, tubo calyce omnino operto, nucibus (immaturis) margine acute dentatis dorso muricatis.

Hab. S. E. Arabia : foot of the Dhofar Mountains, *Bent* (No. 115).

Folia $\frac{3}{4}$–1 poll. longa, 3–6 lin. lata ; petiolus 1–2 lin. longus. *Sepala* temp. florif. 3–5 lin. lata, $\frac{1}{2}$–$\frac{3}{4}$ lin. longa. *Antherarum* conum exsertum facie exteriore inferne albido-pilosum, pilis longitudinaliter seriatis dextrorsum sinistrorsumque divergentibus.—D. Oliver.

Fig. 1. Calyx laid open, the corolla removed. 2. Corolla laid open. 3. Detached stamen. 4. Fruit. 5. Dorsal view of detached nucule. *All enlarged.*

M.S del, et lith.

Ipomœa crinigera, Oliv

Plate 2437.

IPOMŒA CRINIGERA, *Oliv.*

Convolvulaceæ.

I. (§ Orthipomœa) crinigera, *Oliv. (sp. nov.)*; **fruticulosa ramulis** cortice sub lente minutissime ruguloso *atque foliis carnosulis* linearioblongis pinnatim dentatis *margine revolutis* glabris, floribus axillaribus breviter pedunculatis *sæpius* solitariis interdum geminis ternisve, sepalis ovatis acutis *intus* glabris 2 interioribus dorso etiam glabris sed 3 exterioribus (*marginibus* tectis exceptis) extus dense et longe setoso-pilosis, corolla calycem 2–3-plo excedente, filamentis basi dilatatis incrassatis papillosis, stigmatibus didymis lobis ovoideo-globosis papilloso-rugulosis.

Hab. S. E. Arabia: *Dhofar Mountains, Bent* (No. 55).

Fruticulus calyce excepto glaber verosimiliter 1–1½ ped. altus. *Folia* 6–8 lin. longa, 1–2 lin. lata, breviter petiolata. *Pedunculi* 2–3 lin. longi. *Flores* ¾–1 poll. longi; corolla flavescens deinde rubescens; discus brevis, annulatus.

Very different from any *Ipomœa* known to me, and much more suggestive of a frutescent *Convolvulus*. The stigma, however, is typically that of *Ipomœa*.—D. Oliver.

Fig. 1. An outer, and 2, an inner sepal. 3. Corolla laid open. 4. Pistil. 5. Stigma. *All enlarged.*

1.

4.

5

2.

3.

M. S. del, et lith

Vavæa megaphylla, Wright

Plate 2438.

VAVÆA MEGAPHYLLA, *Wright.*

Meliaceæ. Tribe Melieæ.

V. megaphylla, *C. H. Wright in Kew Bulletin*, 1895, 102; ramis teretibus crassis lenticellatis; foliis longiuscule et rigide petiolatis coriaceis glabratis elliptico-obovatis breviter cuspidatis v. obtusis lamina basi in petiolum cuneatim angustata, venis primariis utrinque 11–13, costa valida supra puberula subtus prominente, cymis pedunculatis plurifloris ad apices ramorum congestis, bracteis ovali-oblongis, calycis hirti 5–6-fidi tubo turbinato segmentis ovatis lanceolatis obliquis, petalis 5–7 coriaceis oblongis vix tortis sed marginibus sæpius incurvis tomentellis, filamentis apice liberis intus pilosis, antheris 12–16 exsertis, ovario ovoideo hirsuto 4–5-loculare, ovulis geminatis collateralibus.

Hab. Fiji: Tamavua, *D. Yeoward* (No. 37).

Arbor procera. *Folia* pedalia, 5–6½ poll. lata; petiolus 1½–2½ poll. longus. *Pedunculi* cymarum 3 poll. longi. *Flores* albi.

The description of this fine *Vavæa* is based on an excellent specimen communicated by Mr. Yeoward. We had previously what I take to be a form of the same species with narrower leaves (2½–4½ in. broad) from Mr. Storck.—D. Oliver.

Fig. 1. Calyx laid open, showing the pistil. 2. Petal. 3. Staminal tube laid open, from within. 4. Dorsal view of anthers. 5. Tranverse section of ovary. *All enlarged.*

Cyclocheilon somalense, Oliv.

Plate 2439.

CYCLOCHEILON SOMALENSE, *Oliv.*

Scrophulariaceæ. Tribe Gerardieæ.

Cyclocheilon, *Oliv. in Kew Bulletin*, 1895, p. 222. *Calyx* bilabiatus, herbaceus, labiis æqualibus, reniformi-orbiculatis, integerrimis, basi coalitis. *Corolla* bilabiata calycem superans, tubo oblique ampliato, labio superiore bi- inferiore tri-lobato, lobis patentibus, omnibus subæqualibus rotundatis. *Stamina* didynama, inclusa, filamenta laxe pilosa; antheræ liberæ, glabræ v. basi tantum pilosæ, loculis æqualibus divergentibus breviter mucronatis. *Ovarium* biloculare, glabrum, ovoideo-globosum, compressiusculum; ovula anatropa in loculis geminata, oblique collateralia; stylus gracilis apice oblique stigmatiferus. *Capsula.* . . . Fruticulus *divaricatim ramosus, ramulis rectis pilis brevibus albidis patentibus cano-hispidulis.* Folia *opposita, parva, breviter petiolata, oblanceolata obovata v. elliptica, obtusa, integra, hispidula.* Flores *in axillis solitarii, breviter pedunculati, bibracteolati; bracteolæ obovato-rotundatæ, parvæ, dorso labii calycis arcte applicitæ.*

Hab. E. trop. Africa : Somaliland, *Mrs. Lort Phillips.*

C. somalense, *Oliv.* (*sp. unica*).

Fruticulus 4–8 poll., hispidulus. *Folia* 1–2½ lin. longa. *Calyx* florifer 4–5 lin. latus. *Corollæ* limbus 6–9 lin. diam.

I know of no genus nearly related to this very curious plant, which I think I cannot be wrong in referring to the *Gerardieæ*. It has the characteristic anthers of the group, and the ovules, reduced to a pair in each cell, are not without parallel, but I do not know any scrophulariaceous plant with a similar calyx, the two orbicular, entire and quite equal divisions of which, coherent towards the base, each with an adpressed bracteole opposed to its base, remind one of the foliaceous bracteoles of some *Thunbergiæ*, or of the two outer enlarged sepals of *Hildebrandtia.*—D. Oliver.

Fig. 1. Calyx and adpressed bracteoles. 2. Corolla laid open. 3. Anther, back and front view. 4. Pistil. 5. Vertical section of ovary. *All enlarged.*

M.S.del, et lith.

Pogostemon formosanus, Oliv.

Plate 2440.

POGOSTEMON FORMOSANUS, *Oliv.*

Labiatæ. Tribe Satureineæ.

P. formosanus, *Oliv.* (*sp. nov.*); parce strigilloso-pubescens v. glabrescens, foliis longiuscule petiolatis rhomboideo-lanceolatis ovatisve acutis v. acuminatis basi cuneatim angustatis lobato- (interdum profunde) dentatis, floribus subsessilibus adscendentibus in cymulas 5–8-floras breviter pedunculatas dispositis, cymulis (verticillastris) in spicas densas subcontinuas paniculatas dispositis, bracteis bracteolisque linearibus calyce dimidio brevioribus, calycis parce pubescentis dentibus subulato-lanceolatis ciliatis, corollæ lobis æquilongis 2 lateralibus labii superioris cæteris obtusioribus et paulo latioribus.

Hab. Formosa: Benkinsing (No. 70); Ape's Hill, Takow (No. 1178), *Dr. A. Henry*.

Folia supra et subtus præcipue in costa venisque parce strigillosa, $2\frac{1}{2}$–4 poll. longa, $1\frac{1}{4}$–3 poll. lata; petiolus 1–$1\frac{1}{2}$ poll. longus. *Flores* lilacini.

Nearly allied to *Pogostemon Patchouli*, Pell. (*P. heyneanus*, Benth.), from which it differs in the nearly uninterrupted spikes, the component cymules of which are shortly but distinctly pedunculate, with their flowers directed upwards, not radiately divergent as in the sessile cymules of *P. Patchouli*, and in the small, short, and linear bracteoles, besides the more acute lobing of the leaves. Dr. Henry describes the root as having a 'peculiar, strong odour.'—D. Oliver.

Fig. 1. Detached flower and bracteoles. 2. Corolla laid open. 3. Ovary and base of calyx-tube. 4. Style. 5. Nucules. 6. Detached nucule, showing inner angle. *All enlarged.*

Peridiscus lucidus, Benth.

Plate 2441.

PERIDISCUS LUCIDUS, *Benth.*

Bixineæ ?

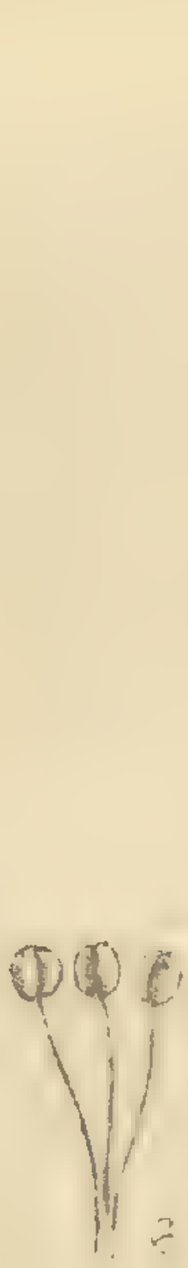
P. lucidus, *Benth. Gen. Plant.* i. 127 ; ramulis teretibus glabris, foliis amplis petiolatis coriaceis ovato- oblongo- v. interdum obovato-ellipticis acutis v. obtusiuscule breviter acuminatis basi plus minus (interdum late) rotundatis integris lucidis e basi trinerviis integerrimis, floribus parvis in racemos simplices plurifloros ad ramulorum nodos inferiores dispositis, bracteis ovato-oblongis deciduis, sepalis 4 6 imbricatis obliquis extus hirto-pubescentibus deciduis, filamentis angustis incurvis glabris exterioribus basi irregulariter coalitis, ovario depresso subhemisphærico glabro usque ad medium disco carnoso crassiusculo verticaliter sulcato adnato.

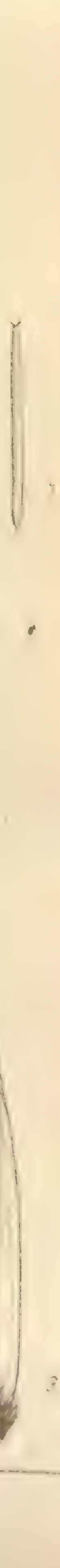
Hab. On the borders of Brazil and Venezuela : on the Uaupés and Upper Pacimoni, *Spruce* (Nos. 2843, 3389).

Arbor 50–80-pedalis. *Folia* 4–9 poll. longa, 2–4½ poll. lata ; petiolus 6–8 lin. longus ; stipulæ caducæ. *Racemi* 1–1½ poll. longi. *Flores* hermaphroditi v. masculi.

Of the fruit I have only seen immature examples, and several of these seem to be insect-punctured. They are ovoid, obovoid or ellipsoidal and narrowed below into a short, stout, but distinct, stipes ; the pericarp already of almost bony hardness. Dr. Warburg, in Engler and Prantl, *Natürl. Pflanzenfam.* (*Flacourtiaceæ*, 54), describes it as one-seeded ; the seed as exalbuminous and the embryo curved ; adding, that, on the ground of these seminal characters, the plant would seem referable rather to *Ternstræmiaceæ* than to *Flacourtiaceæ*. In this view of its affinity I cannot acquiesce, and should like to see mature fruit and seed before expressing any decided opinion. It may be that the publication of this figure in the *Icones Plantarum* may direct attention to what must be a rare tree, hitherto collected, so far as I know, only by the late Mr. Spruce. In the meantime it may well remain where Mr. Bentham, without any note of doubt, left it.—D. Oliver.

Fig. 1. Flower. 2. Group of stamens. 3. Anther, front and back views. 4. Pistil, with adnate disk. 5. Vertical section of ovary. *All enlarged.*





M.S del et lith

Tripogon pauperulus, Stapf.

Plate 2442.

TRIPOGON PAUPERULUS, *Stapf.*

Gramineæ. Tribe Chlorideæ.

T. pauperulus, *Stapf* (*sp. nov.*); annuus, nanus, glaber, culmis tenuibus, foliis spiculas superantibus vel æquantibus, vaginis infimis laxis plus minusve patulo-erectis summis arctis striatis, ligulis membranaceis ovatis obtusis, laminis angustissimis setaceo-involutis acutis tenuiter prominulo-nervosis nervis circiter 11, spiculis 3-2 plus quam longitudine sua inter se remotis vel solitariis in culmorum apicibus, 4–1-floris, gluma i. symmetrica anguste lanceolata uninervi acutissima, gluma ii. simili sed dimidio longiore aristulata, glumis florentibus 4–1 (summis 2–1 vacuis minoribus additis) explanatis oblongis 3-nervibus inter lobos setaceo-aristatos arista subgeniculata infra genu contorta instructis, paleis oblongis in carinis ciliatulis, antheris 3 minutis subglobosis, caryopsi angustissime cylindrica.

Hab. India: Crest of the Western Ghauts near Poona, on old stems of *Ficus glomerata*, with mosses and *Utricularia orbiculata*, *Woodrow*.

Gramen 2–2½ poll. altum. *Spiculæ* aristis exceptis circa 4 lin. longæ; gl. i. 2 lin., gl. ii. ad 3 lin., gl. iii. 2·5–3 lin. (ad aristæ basin) longa, arista ad 5 lin. longa.

Evidently allied to *Tripogon capillatus*, Jaub. and Spach, but distinct in the symmetrical outer glume, and the different armature of the spikelets, particularly the much stouter and shorter middle awn of glume iii. Like *T. capillatus*, it seems to grow in moss.—O. Stapf.

Fig. 1. Ligule. 2. Spikelet, with two lower florets. 3. Flowering glume, side view. 4. Same, back view. 5. Palea. 6. Stamens. 7. Caryopsis. *All enlarged.*

M. S del et lith

Cynometra trinitensis, Oliv.

Plate 2443.

CYNOMETRA TRINITENSIS, *Oliv.*

Leguminosæ. Tribe Cynometreæ.

C. trinitensis, *Oliv.* (*sp. nov.*) ; foliolis unijugis plus minus coriaceis valde inæquilateralibus oblique ovato- v. oblongo-ellipticis obtusiuscule apiculatis glabris, florum fasciculis axillaribus sessilibus multifloris, bracteis late ovatis concavis striatis fusco-puberulis caducis, pedicellis pilosulis bractea longioribus, calycis segmentis 4 longitudinaliter venosis inæquilateralibus, petalis 5 calycem superantibus subæqualibus subcymbiformibus acutiusculis 1-nerviis penniveniis, staminibus 10, filamentis glabris, ovario brevissime stipitato compresso parce pilosulo 1-ovulato, legumine subgloboso v. leviter compresso, pericarpio tenuiter crustaceo obscure papilloso-verrucoso sublævi.

Hab. W. Indies : Trinidad, *Crueger*, *Prestoe*, &c.

Arbor mediocris, corona densa ; ramulis glabratis crassitie pennæ corvinæ, ultimis pendulis. *Foliola* brevissime petiolulata 3–4½ poll. longa, 1¼–2 poll. lata ; petiolus 4–6 lin. longus. *Fasciculi florum* 1–1½ poll. diam. *Calycis* tubo brevissimo. *Stamina* alternatim breviora ; antheræ parvæ, versatiles, late ellipticæ. *Legumen* 1–1⅓ poll. diam.

This fine species has long been in the Kew Herbarium, but not hitherto satisfactorily determined, and the recent receipt of excellent specimens from Mr. Hart has again brought it under notice. It was regarded by Dr. Grisebach (*ex descr.*) as *C. crassifolia*, Benth. (described from specimens in the Paris Herbarium), but Mr. Bentham did not confirm this, and thought it might prove to be *C. americana*, Vog. Dr. Schumann some years ago kindly compared a specimen for us with Vogel's type, and found it 'quite different.' It resembles *C. ramiflora*, L., of India, but the fruit is entirely different.—D. Oliver.

Fig. 1. Flower, with bract and bracteoles. 2. Petal. 3. Anther, front and back views. 4. Carpel, the ovary laid open. 5. Fruit. 6. Embryo. *Except* 5 *and* 6, *enlarged.*

Xymalos monospora, Baill.

Plate 2444.

XYMALOS MONOSPORA, *Baill.*

Monimiaceæ.

Xymalos, *Baillon in Bull. Soc. Linn. Par. i.* 650 (1887) : (char. hic emend.). *Flores* dioici. *Perianthium* fl. ♂ 4–6-partitum, segmentis rotundatis ovatis v. lanceolatis, inæquilateralibus, extus hirtis. *Stamina* ∞ ; antheræ subsessiles late ellipticæ v. obovatæ, inappendiculatæ, biloculares, longitudinaliter dehiscentes. *Ovarii* rudimentum 0. *Perianthium* fl. ♀, 4- v. 3-fidum v. -lobulatum, segmentis rotundatis ; *staminodia* non vidi. *Ovarium* obovoideum v. turbinatum, glabrum, 1-loculare ; ovulum solitarium, pendulum, anatropum ; stigma crassum, sessile, discoideum v. subhemisphæricum. *Fructus* subglobosus v. oblique obovoideus, stigmate coronatus ; pericarpio tenuiter coriaceo, lævi. *Semen* compressum, ellipsoideum, albuminosum ; embryo parvus, radicula crassa, obtusa, cotyledonibus rotundatis planis oblique applicitis æquilonga.—Frutex *v.* arbuscula *ramulis teretibus foliisque glabris.* Folia *subopposita, tenuiter coriacea, ovali- v. oblanceolato-oblonga acuta v. obtusa, basi in petiolum angustata, integra v. apicem versus repando- v. distanter serrato-dentata sub lente minutissime pellucido-punctata, costa subtus et nervis primariis validis.* Flores *in racemos axillares petiolo longiores pubescentes dispositi ; bracteæ ovatæ v. oblongæ ; flores* ♀ *sæpe* 1–2-*bracteolati.*

X. monospora, *Baillon, l.c.* ; Xylosma ? monospora, *Harv. Thes. Cap. ii.* 52. *tab.* 181 ; Toxicodendron acutifolium, *Benth. in Journ. Linn. Soc.* xvii. 214.

Hab. South Africa : Natal, *Cooper*, *Gerrard*, *Wood* ; Transvaal, *Nelson* ; Orange Free State, *Cooper* ; Kaffraria, *Barber* ; Victoria East, *Tyson* ; Amatola range, *Hb. MacOwan.*

Folia 4–4½ poll. longa, 1–1¾ poll. lata ; petiolus ¼–½ poll. longus.

Of this anomalous plant, originally published by Prof. Harvey with doubt as a species of *Xylosma*, seeds were received last year from Prof. Macowan of Cape Town, which complete our knowledge of it, and confirm my original impression, noted upon Mr. Cooper's specimens received many years ago, that its affinity is rather with *Monimiaceæ* than with either *Flacourtiaceæ* or *Euphorbiaceæ*, with which it has been hitherto associated. Its nearest ally known to me

M. S. del. et lith.

Phillipsia fruticulosa, Rolfe.

Plate 2445.

PHILLIPSIA FRUTICULOSA, *Rolfe.*

Acanthaceæ. Tribe Ruellieæ.

Phillipsia, *Rolfe in Kew Bulletin*, 1895, 223. *Calyx* anguste tubulosus, 5-angulatus, 5-dentatus, dentibus tubo brevioribus æqualibus, subulatis, primum conduplicatis. *Corollæ* tubus longe et anguste cylindraceus, calyce subduplo longior, apice in faucem leviter ampliatus; limbus subæqualis, patens, lobis 5 rotundatis æstivatione contortis. *Stamina* 4, fere æquilonga, ad medium faucis affixa, subexserta; filamenta gracilia; antheræ oblongæ, loculis æqualibus parallelis muticis. *Discus* inconspicuus. *Stylus* gracilis, apice crassiusculus. *Ovula* in quoque loculo 2. *Capsula* calyce clauso inclusa, lineari-oblonga, acuta. *Semina* 4, plano-compressa, retinaculo brevi fulta.—Fruticulus *ramosus, ramulis sæpius alternis divaricatis tetragonis atque foliis crispule canopubescentibus.* Folia *parva, opposita, carnosula, brevissime petiolata, suborbicularia, interdum obscure crenato-lobulata.* Flores *axillares, solitarii, subsessiles, bibracteolati, bracteolis minimis carnosulis lineari-lanceolatis.*

P. fruticulosa, *Rolfe, l.c.* (*sp. unica*).

Hab. Somaliland: Golis Range, *Mrs. Lort Phillips.*

Folia 2–5 lin. longa, 2–4 lin. lata. *Calyx* 5–7 lin. longus. *Corollæ* tubus 9 lin. longus; limbus $\frac{1}{3}$–$\frac{1}{2}$ poll. diam. *Capsula* 5–6 lin. longa.

Allied to the African genera *Satanocrater* and *Physacanthus*, but very distinct in habit.—R. A. Rolfe.

Fig. 1. Calyx and bracteoles. 2. Corolla laid open. 3. Anther, back and front views. 4. Ovary with base of calyx-tube. 5. Capsule. *All enlarged.*

Hyoscyamus leptocalyx, Stapf.

Plate 2446.

HYOSCYAMUS LEPTOCALYX, *Stapf.*

Solanaceæ. Tribe Hyoscyameæ.

H. leptocalyx, *Stapf (sp. nov.)*; perennis, a basi pluricaulis, caulibus flaccidis anfractuosis papilloso-hirsutis, foliis longipetiolatis deltoideis vel subreniformibus grosse dentatis ciliolatis, floribus solitariis axillaribus longipedunculatis, calyce cupulari tenui ad medium 5-lobo lobis ovatis obtusis ciliatis, corolla subrotata aurea tubo basi breviter cylindrico deinde in faucem cupularem latum ampliato lobis latissime ovatis, antheris exsertis, pyxidio turbinato e tubo exserto calycis lobis breviore, seminibus seriatim granulatis.

Hab. Kurdistan: in fissures of rocks near Mardin, *Sintenis* (No. 1000 of 1888).

Planta ad 6 poll. longa. *Folia* 6–8 lin. longa, 8–12 lin. lata; exsiccata tenuissima, glauca, 5–7-dentata; petiolus papilloso-hirsutus sursum sæpe plus minusve dilatatus, 6–12 lin. longus *Pedunculi* tandem ad 2 poll. longi, curvati. *Calyx* ad 3 lin. longus atque latus, lobis demum reflexis. *Corolla* 7–9 lin. diam.

A very distinct species, representing an isolated type, characterised by the very short and delicate calyx-tube and the short and rather flat corolla. *H. flaccidus*, Wright, from the Dhofar Mountains, South-East Arabia, with which it was compared (see *Kew Bulletin*, 1895, 184), has a similar flaccid habit, but it is an annual, having the flowers in slender racemes, a long obconical calyx and a corolla typical of the genus.—O. Stapf.

Fig. 1. Calyx. 2. Corolla. 3. Calyx-tube laid open, showing capsule. 4. Seed. *All enlarged.*

M.S. del. et lith

Woodrowia diandra, Stapf.

Plate 2447.

WOODROWIA DIANDRA, *Stapf.*

Gramineæ. Tribe Agrostideæ.

Woodrowia, *Stapf* (*gen. nov.*) *Spiculae* 1-floræ, secus ramos inarticulatos paniculæ solitariæ, cum pedicello apice dilatato articulatæ, a latere compressæ, flore hermaphrodito. *Glumæ* 3; 2 exteriores vacuæ, dorso plus minusve incrassatæ vel carinatæ ceterum pertenues, obscure 1-nerves vel i. sub apice sub-3-nervis, ii. brevior angustiorque; iii. florens, secundæ subæquilonga, hyalina, 1-nervis, apice biloba, arista inter lobos tenui, geniculata; palea hyalina. *Stamina* 2. *Styli* distincti, stigmatibus anguste plumosis, lateraliter exsertis. *Caryopsis* tenuiter cylindrica, glumis inclusa, libera.—Gramen *annuum, foliis planis.* Panicula *terminalis, contracta, pedunculata, rhachi brevi, ramis gracillimis simplicibus.* Spiculæ *basi pilis brevibus nitidis cinctæ.*

W. diandra, *Stapf* (*sp. unica*); culmis ramosis gracilibus ad nodos pilorum annulo adpressorum ornatis laevibus, internodiis intermediis longe exsertis, vaginis arctis glabris vel inferioribus superne hirsutis summis interdum dilatatis apertisque, laminis anguste linearibus, setaceo-attenuatis summis admodum redactis vel omnino suppressis hirsutis in margine asperis, ligula brevi truncata ciliolata, paniculæ ramis circiter 4, spiculis virescentibus vel violascentibus, gluma i. in dorso plus minusve pilosa in marginibus ciliolata, ii. in carina dense ciliata, iii. cum arista secundum spiras columnæ brunneæ ciliata supra genu flavescente, palea plicata explanata obovata enervi minute ciliolata, lodiculis latis inæqualiter lobulatis, caryopsi flavescente glabra.

Hab. India: Poona Distr., Mawal, *Woodrow.*

Gramen $1\frac{1}{2}$–2 ped. altum. *Foliorum* lamina inferiorum 3–4 poll. longa, 1–2 lin. lata. *Panicula* 2 poll. longa; rhachis communis 3–4 lin. longa; pedicelli ad $\frac{1}{2}$ lin. longi. *Spiculæ* 3 lin. longæ; aristæ columna 2 lin. longa, seta 3–4 lin. longa. *Caryopsis* 3–3·5 lin. longa.

Woodrowia is allied to *Garnotia*, Brongn., and it particularly resembles weak forms of *G. polypogonoides*, Oliv. The principal differences are in the structure of the panicle and in the nervation of the glumes, which are moreover laterally compressed in a very marked degree. The thickening of the dorsal portion of the glumes i. and ii. varies remarkably from a slightly coriaceous texture to a stout spongy keel,

M.S. del. et lith.

Halopyrum mucronatum Stapf

Plate 2448.

HALOPYRUM MUCRONATUM, *Stapf.*

Gramineæ. Tribe Festuceæ.

Halopyrum, *Stapf* (*gen. nov.*). *Spiculæ* multifloræ, paniculatæ, rhachilla inter flores articulata, articulis cito solvendis, sericeo-pilosa, floribus hermaphroditis. *Glumæ* 2 inferiores vacuæ, subæquales, florentibus breviores, carinatæ, inferior 3-, superior 5-nervis; florentes rigidæ, carinatæ, 3-nerves, mucronatæ; palea glumæ aequilonga, 2-carinata. *Stamina* 3. *Styli* distincti, breves, stigmatibus plumosis. *Caryopsis* ambitu rotundato-elliptica, antice late sulcata, gluma paleaque laxe inclusa, libera.—Gramen *perenne, elatum.* Panicula *stricta, contracta, ramis racemosis.* Spiculæ *pedicellatæ vel imæ ramorum subsessiles,* 10–15-*floræ, oblongæ, a latere compressæ, planæ, glumis eximie distichis.*

H. mucronatum, *Stapf* (*sp. unica*); **rhizomate repente cataphyllis ovatis acuminatis duris obtecto fibrillas crassas emittente, culmis fasciculatis simplicibus vel ramosis duris, foliorum vaginis arctis striatis, laminis longis convolutis setaceo-acuminatis tenacibus glabris, ligulis ad lineam pilorum redactis.**—Uniola mucronata, *L. Sp. Plant. ed.* i. 104 (*ex descr.*); Triticum repens, *Thwait. Enum. Pl. Zeyl.* 376, *non L.*; Desmazeria unioloides, *Defl. Voy. Yemen*, 220; Brizopyrum mucronatum, *Nees in Wall. Cat. Herb. Ind. n.* 8898; Eragrostis (§ Sclerostachya), sp. *Benth. et Hook. Gen. Plant.* iii. 1187.

Hab. Coast of Western India from Sind to Ceylon: Sind, *Stocks* (No. 567); Guzerat, Purbonder, *Dr. Lisboa's collector*; Cape Comorin, *Dr. Thurston*; Tinnevelly, Tuticorin, *Wight* (No. 1094 in hb. prop.) (*Wight Cat.* 2386, *Wall. Cat.* 8898); North Ceylon, *Gardner* (*Thwaites*, C.P. 924). Coast of Arabia, from Hedjas to Aden: 'Arabie heureuse, endroits salés,' janv., févr., 1831, *Bové*; Isthmus of Aden, *Schweinfurth*, *Mem. Forsk.* No. 112. Coast of East Africa, from the Rovuma to the Zambesi: Mouth of Rovuma River, Quillimane and Mouth of Luabo, *Kirk*; 'Raza Island,' *Forbes.*

The systematic position of this grass, which seems to have been known since the days of Linnæus, has hitherto been very unsettled, as will be seen from the synonyms quoted above. Its proper place is

near *Eragrostis*, and not in *Eufestuceæ*. The essential characters which separate it from *Eragrostis* are the more numerous nerves of glumes i. and ii., the very rigid texture of all the glumes, and the large, broadly grooved caryopsis. Most of these characters occur in *Triodia*, from which genus *Halopyrum* differs mainly in the 3- and 5-nerved empty glumes and in the entire flowering glumes. The two remaining species which were referred to the section *Sclerostachys* of *Eragrostis* have very little in common with the plant figured here.—O. Stapf.

Fig. 1. Ligule. 2. Spikelet. 3. Lower outer glume. 4. Upper outer glume. 5. Floret. 6. Flowering glume. 7. Palea. 8. Lodicule. 9. Pistil. 10. Caryopsis, anterior, and 11, posterior view. 12. Transverse section of same. *All enlarged.*

Samadera Bidwillii, Oliv.

Plate 2449.

SAMADERA BIDWILLII, *Oliv.*

Simarubeæ.

S. Bidwillii, *Oliv.* ; ramulis rectis teretibus appresse et minute canopubescentibus, foliis subcoriaceis anguste ovalibus utrinque angustatis obtusiusculis v. interdum emarginatis, venis obscuris subparallelis in vena intramarginali confluentibus supra glabris subtus præcipue in costa pilis minutis appressis sparsis instructis v. glabrescentibus, floribus in fasciculis paucifloris axillaribus sessilibus v. brevissime pedunculatis, pedicellis alabastro haud longioribus, floribus 4–5-meris, sepalis parvis fere liberis ovato-deltoideis crassiusculis, petalis late ovato-ellipticis dorso parce hirsutis, filamentis liberis late dilatatis intus fere ad apicem ligula hirsuta instructis apice abrupte angustatis, ovariis hirtis apicibus in stylum confluentibus, stigmate breviter 4–5-lobulato.—Hyptiandra Bidwillii, *Hk. f. in Gen. Pl.* i. 294 ; *Benth. Fl. Austral.* i. 374.

Hab. Queensland : Wide Bay, *Bidwill.*

Arbuscula verosimiliter, ramulis ultimis crassitie pennæ corvinæ. *Folia* alterna, petiolata, 3–4½ poll. longa, 6–9 lin. lata ; petiolus 2 lin. longus. *Alabastra* ovoidea v. subglobosa ; flores c. 2 lin. diam. *Petala* æstivatione contorta v. interdum petalo unico omnino incluso. *Antheræ* breviter oblongæ. *Discus* crassus.

Representing the fruit, we have two detached carpels communicated by Sir F. v. Mueller, from Endeavour River, under the above name. They are about 5 lines in length, with a broad basal scar of attachment. The outer pericarp is pubescent, thin ; endocarp thinly crustaceous ; seed solitary, with papery testa, exalbuminous ; radicle short, exserted, ovoid ; cotyledons obovoid, plano-convex, fleshy.

I should scarcely have ventured to reduce this rare plant to *Samadera* (although in floral structure I find no more important difference than the height on the filament to which the characteristic hairy ligule extends, and its abrupt constriction just below the anther), were it not that Mr. Bailey, Queensland Colonial Botanist, has kindly communicated a specimen from the Bellenden-Ker region, under the name of *Hyptiandra Bidwillii*, var. *grandiuscula*, Bail. & F. v. M. (*Synops. Queensl. Flora, Suppl.* iii. 12), which agrees with our plant in having the leaves narrowed into their petioles unlike typical *Samadera*, but with inflorescence and flowers characteristic of the Indian species of that genus A figure is given of this plant on the following plate. – D. Oliver.

Fig. 1. Flower, petals and stamens removed. 2. Petal. 3. Stamens, inner and outer views. 4. Vertical section of a lobe of ovary. *All enlarged.*

M.S.del,et lith

Samadera baileyana, Oliv.

Plate 2450.

SAMADERA BAILEYANA, *Oliv.*

Simarubeæ.

S. baileyana, *Oliv.*; arbuscula glabra, foliis coriaceis oblanceolatis breviter obtusiuscule acuminatis cuspidatisve basi in petiolum angustatis, costa subtus valida, supra venis subparallelis (in sicco) conspicuis glabris, inflorescentia pedunculata axillari, floribus quasi umbellatis pedicellatis, pedicellis incurvis, calycis 5-fidi parvi coriacei segmentis concavis ovato rotundatis, petalis calyce 8–10-plo longioribus oblongis obtusis genitalia superantibus, filamentis gracilibus basi intus ligula dense hirsuta instructis, antheris oblongis, disco carnoso sulcato, ovario glabro v. basi hirto, carpellis inferne liberis apice in stylum coalitis, stigmate parvo 5-lobulato.—Hyptiandra Bidwillii, var. grandiuscula, *Bail. et F. v. M.* in *Synops. Queensl. Flora, Suppl.* iii. 12.

Hab. Queensland: Mt. Bellenden-Ker, 4000 ft. alt., *Bailey*.

Folia in ramulis floriferis 5–9 poll. longa, $1\frac{1}{2}$–$2\frac{1}{4}$ poll. lata; petiolo 6–9 lin. longo. *Flores* 6–9 lin. diam.; pedicelli 4 lin. longi.

From the description and figure given herewith it will be plain that this plant is specifically distinct from *S. Bidwillii* figured on the preceding plate.—D. Oliver.

Fig. 1. Flower. 2. Petals and stamens removed. 3. Stamens, inner and outer views. 4. Detached lobe of ovary. *All enlarged.*

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VOL. V.

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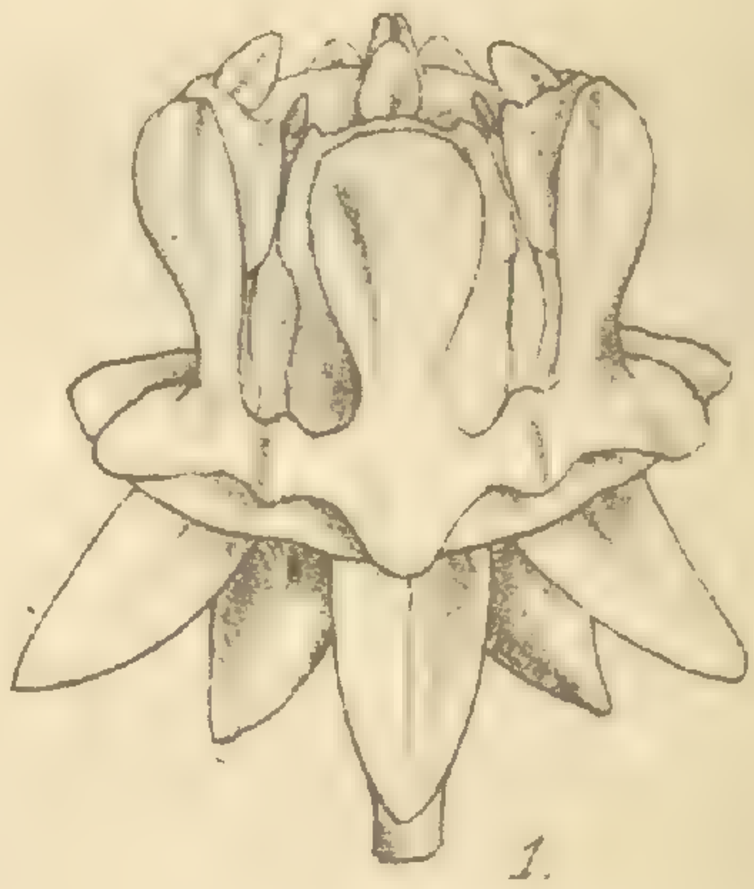

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3

5.

M.S. del. et lith

Platykeleba insignis N.E.Br

Plate 2451.

PLATYKELEBA INSIGNIS, *N. E. Br.*

Asclepiadeæ. Tribe Cynancheæ.

Platykeleba, *N. E. Br. in Kew Bulletin*, 1895, 250. *Calyx* brevis, 5-partitus. *Corollæ* limbus late rotato-campanulatus, breviter angulato-lobatus. *Corona* duplex; exterior carnosula, breviter cupularis, basi corollæ inserta, margine late deltoideo-lobata, lobis medio gynostegii adnatis; corona interior 5-lobata, lobis ovatis rotundatisve obtusis gynostegio paullo brevioribus leviter concavis v. mox fere planis cum coronæ exterioris lobis continuis. *Stamina* prope basin corollæ affixa; antheræ breves, apice membrana inflexa appendiculatæ; pollinia in quoque loculo solitaria, oblonga, pendula. *Stigma* breviter rostratum.—Fruticulus *aphyllus, ramis floriferis erectis, simplicibus v. parce ramosis gracilibus glabris, cortice carnosulo.* Umbellæ *paucifloræ, ad nodos sessiles.* Flores *majusculi, purpureo-venosi.*

P. insignis, *N. E. Br. l.c. (sp. unica).*

Hab. Central Madagascar, *Baron* (No. 973).

Rami in spp. exsiccatis circa 1 lin. diam., 8-12 poll. longi. *Pedicelli* $1\frac{1}{2}$–3 lin. longi. *Calycis* segmenta ovata, obtusiuscula. *Corolla* circa 6–8 lin. diam.

The flowers of this interesting plant are very similar to those of *Oxystelma*; in our specimens they are all expanded, but would appear as though in æstivation the corolla were either very narrowly imbricate or valvate. The corolla is prettily pencilled with radiating purple lines.—D. Oliver.

Fig. 1. Flower from which the corolla has been removed. 2. Sepal seen from within with basal glands. 3. Anther, dorsal view, coronal lobe removed. 4. Anther seen from within. *All enlarged.*

M.S.del. et lith.

Schizoglossum connatum, N. E. Br.

Plate 2452.

SCHIZOGLOSSUM CONNATUM, *N. E. Br.*

Asclepiadeæ. Tribe Cynancheæ.

S. connatum, *N. E. Br. in Kew Bulletin*, 1895, 69 ; caulibus gracilibus erectis strictis simplicibus atque foliis erectis subsessilibus anguste linearibus acuminatis marginibus revolutis crispule pubescentibus, umbellis sessilibus 6–10-floris hirtis, corollæ fere 5-partitæ lobis anguste lineari-lanceolatis falcatim incurvis lateribus replicato-revolutis apicibus coalitis utrinque hirtis v. intus glabris, coronæ lobis erectis gynostegio fere æquilongis cuneato quadratis apice truncatis denticulatis, antheris membrana rotundata terminatis, gynostegio apice mutico.

Hab. South Tropical Africa : Fwambo, south of Lake Tanganyika, *Carson* (No. 17).

Caulis bipedalis, circa 1 lin. diam. *Folia* 2-2½ poll. longa, ½-1 lin. lata. *Pedicelli* 1½–2 lin. longi. *Sepala* lanceolata, acuminata, patentia, 1–1½ lin. longa. *Corollæ* lobi 3 lin. longi.

Mr. Brown points out the resemblance in the habit of this plant to *S. interruptum*, Schlecht., and *S. angustissimum*, Schum., differing from these and other known species of the genus in the cohesion of the tips of the corolla-lobes ; a feature characteristic of some species of *Ceropegia* and *Brachystelma*.—D. Oliver.

Fig. 1. Section of leaf. 2. Flower. 3. Corona. 4. Inner view of corona. 5. Staminal column, corona removed. 6. Pollinia. *All enlarged.*

M.S del.et lith.

Anisopus Mannii, N.E.Br.

PLATE 2453.

ANISOPUS MANNII, *N. E. Br.*

ASCLEPIADEÆ. Tribe MARSDENIEÆ.

Anisopus, *N. E. Br. in Kew Bulletin*, 1895, 259. *Calyx* parvus, 5-partitus. *Corolla* rotata, 5-fida, æstivatione angustissime imbricata. *Corona* duplex ; exterioris lobi brevissimi, tuberculiformes, carnosi, hirti, sub sinibus corollæ affixi ; interioris squamæ 5, lineari-oblongæ, carnosæ, triquetræ, medio per totam longitudinem gynostegio adnatæ. *Stamina* prope basin corollæ affixa ; antheræ apice membranaceo-appendiculatæ ; pollinia erecta, in quoque loculo solitaria. *Stylus* breviter exsertus ; stigma bilobum.—Frutex *volubilis, fere omnino glaber.* Folia *petiolata, opposita, membranacea.* Umbellæ *axillares, sæpe oppositæ, altera pedunculata altera sessilis.*

A. Mannii, *N. E. Br. l.c.* (*sp. unica*) foliis ovatis v. late ellipticis subito acuminatis basi rotundatis, umbellis plurifloris.

HAB. W. Tropical Africa : Corisco Bay, *Mann* (No. 1862).

Frutex volubilis, 12–15 pedalis. *Folia* $2\frac{1}{4}$–3 poll. longa, $1\frac{1}{4}$–$1\frac{3}{4}$ poll. lata ; petiolus 6–9 lin. longus. *Pedicelli* 2–4 lin. longi.

Probably a near ally of *Marsdenia*, which, Mr. Brown points out, it resembles in its inner corona, while it has the outer corona of *Leptadenia*.—D. OLIVER.

Fig. 1. Bud. 2. Corolla laid open, revealing the staminal column. 3. Corona. 4. Lobe of corona from the inside. 5. Staminal column, corona removed. 6. Pollinia. *All enlarged.*

M.S. del. et lith.

Stauranthera chiritæflora Oliv.

Plate 2454.

STAURANTHERA CHIRITÆFLORA, *Oliv.*

Gesneraceæ. Tribe Cyrtandreæ.

S. chiritæflora, *Oliv.* (*sp. nov.*) ; herba oppositifolia, folio altero nano stipuliformi, folio majore tenuiter membranaceo sessili ovato-oblongo oblique inæquilaterali acuminate serrato supra pilis brevibus sparsissimis instructo subtus glabro, pedunculis axillaribus folio brevioribus pubescentibus, floribus racemoso-cymosis, pedicellis sæpius geminatis ebracteatis, corolla rosea tubuloso-ventricosa bilabiata labio superiore bilobato inferiore trilobato lobis omnibus ovato-rotundatis obtusis, ovario ovoideo glabro plane biloculare placentis bifidis undique ovuliferis, capsula globosa apice tarde bivalvatim dehiscente, pericarpio tenui.

Hab. China : Mongtse, Yunnan, 'in a dark, damp glen under shady precipices, rare,' *Hancock* (No. 51).

Folia 5–7 poll. longa, $1\frac{1}{2}$–$2\frac{1}{2}$ poll. lata, basi late rotundata v. semicordata. *Pedicelli* ebracteati 6–9 lin. longi, pubescentes. *Calyx* late campanulatus, 5-fidus, segmentis subæqualibus ovatis, obtusiusculis sinibus haud plicatis. *Corolla* uncialis, calyce 8–10-plo longior. *Stamina* perfecta 4, inclusa, basi corollæ inserta ; antheræ in coronulam cohærentes, loculis confluentibus divaricatis. *Discus* annularis, parvus. *Stylus* longiusculus, gracilis, persistens, post fructus dehiscentiam basi fissus ; stigma bilobatum. *Fructus* globosus, vix exsertus ; semina numerosissima, ovali-oblonga.

It is not without hesitation that I refer this fine plant to *Staurantheria*. It has indeed the anthers and globose capsule of that genus, but the corolla is that of some species of *Chirita* ; the ovary and capsule are genuinely bilocular, and the dehiscence of the latter is, at least in one example, which may, however, have been split in drying, by two valves from above. Besides there is no tendency to a spur at the base of the corolla, as in *S. grandiflora*, and the style, though included, is long and slender. The leaves, excepting that they are sessile, are similar to those of *Staurantheria*, and the inflorescence resembles that of *S. umbrosa*.

The alternative would be to erect this plant into a new genus, but in view of the artificial character of many already described and the influx of two forms from Eastern Asia I prefer to leave it as above.—D. Oliver.

Fig. 1. Calyx laid open and pistil. 2. Corolla laid open. 3. Views of anther. 4. Section of ovary. 5. Capsule in calyx from which one lobe has been cut off. 6. Seed. *All enlarged.*

M S. del. et lith.

Crocosmia aurea (Hook.)

Plate 2455.

CREAGHIELLA PURPUREA, *Stapf.*

Melastomaceæ. Tribe Oxysporeæ.

Creaghiella, *Stapf* (*gen. nov.*). *Flores* 4-meri. *Calycis* dense hirsuto-tomentosi tubus campanulatus, lobis triangulari-lanceolatis acutis. *Petala* parva, obovato-oblonga, acuminata, seta decidua terminata. *Stamina* 8, inæqualia; antheræ episepalæ majores e basi lanceolata longe tenuiterque acuminatæ, curvatæ, antice bilobatæ, connectivo postice vix gibbosulo; antheræ epipetalæ lanceolatæ, acutissimæ, subfalcatæ, basi breviter bilobæ, connectivo postice basi gibboso, omnes fertiles, apice poro dehiscentes. *Ovarium* ad medium ope septorum 8 tenuium tubo adnatum, 4-loculare, vertice glabro crasso exsculpto coronula denticulata cincto, stylo longiusculo sigmatoideo, stigmate punctiformi. *Capsula* vertice concava, valvis 4 crista denticulata ornatis dehiscens. *Semina* minuta, oblique obverse pyramidata, testa tenui, raphi angusta; embryo rectus.—Frutex *undique dense hirsuto-tomentosus.* Folia *petiolata, ovata, breviter acuminata, denticulata, 7-nervia, transverse venosa.* Umbellæ *terminales, multifloræ.*

C. purpurea, *Stapf* (*spec. unica*); ramis ramulisque crassiusculis, hisce cum inflorescentiis sæpe vivide purpurascentibus, foliis crassiuscule membranaceis, supra flavido-viridibus velutinis subtus canescentibus nervis sæpe purpurascentibus, umbellis breviter vel longiuscule pedunculatis primo valde contractis globosis tandem laxioribus, alabastris breviter conicis calycis lobis superatis vel subsuperatis, antheris majoribus purpurascentibus, minoribus flavis, capsula calyce diu persistente cincta tandem a medio libera.

Hab. British North Borneo: Maruda Bay, Tanjong Batu, Sandakan, *Governor Creagh.*

Folia 4–6½ poll. longa, 3–4½ poll. lata; petiolus 1–3 poll. longus. *Pedunculus* ½–1½ poll. longus; pedicelli tandem ad 6 lin. longi. *Calycis* tubus 1½–2¾ lin. longus, lobi 1–1½ lin. longi. *Petala* vix 2 lin. longa. *Antheræ* majores 4 lin. longæ, minores 2 lin. longæ. *Capsula* matura 2 lin. longa, vix 2 lin. diam.

Creaghiella is nearest allied to *Anerincleistus*, although the unequal stamens and the strictly terminal inflorescence would bring it nearer to *Bredia.* The foliage closely resembles that of *Anerincleistus Griffithii*,

Baphia borneensis, Oliv.

Plate 2456.

BAPHIA BORNEENSIS, *Oliv.*

Leguminosæ. Tribe Sophoreæ.

B. borneensis, *Oliv.* (*sp. nov.*); ramis teretibus, novellis fulvo- v. ferrugineo-tomentellis, foliis tenuiter coriaceis oblongo-ellipticis obtuse apiculatis apice costa sæpius breviter mucronatim productis supra glabris subtus præcipue in costa nervisque pubescentibus, floribus 4–8 aggregatis fasciculato-racemosis racemis brevibus axillaribus vel supremis aphyllis racemoso-paniculatis, bracteolis parvis oblongis alabastro multo brevioribus, filamentis hirtis, ovario oblongo tomentoso, ovulis 7–10, stylo decurvo.

Hab. North Borneo : Limbang River, *Haviland* (No. 57), Sandakan, *Creagh.*

Folia tenuiter coriacea, minute reticulata, 3–4½ poll. longa, 1½–2 poll. lata; petioli 6–9 lin. longi; stipulæ parvæ, lanceolatæ, caducæ. *Pedicelli* 6–10 lin. longi, pubescentes. *Bracteolæ* patentes v. recurvæ, 1–1½ lin. longæ. *Calyx* spathaceo-fissus, per anthesin reflexus, apice sæpius 2–3 dentatus. *Vexillum* orbiculatum, vix unguiculatum. *Alæ* oblique oblanceolatæ, brevissime unguiculatæ. *Carinæ* petala oblanceolata, obtusa, alis æquilonga, medio quasicohærentia. *Antheræ* linearioblongæ, basifixæ. *Legumen* non vidi.

Hitherto, so far as I am aware, this genus, of which there are now at least ten described species, has been known solely from Tropical Africa and Madagascar: its extension eastward to Borneo is of considerable interest. The young legumes are usually deflected at about right angles to the pedicel.—D. Oliver.

Fig. 1. Calyx and genitalia. 2. Standard. 3. Wing-petal. 4. Keel-petal. 5. Section of pistil. *All enlarged.*

M. S. del. et lith.

Lithospermum hancockianum, Oliv

Plate 2457.

LITHOSPERMUM HANCOCKIANUM, *Oliv.*

Boragineæ. Tribe Borageæ.

L. hancockianum, *Oliv.* (*sp. nov.*); frutex caulibus dense foliosis internodiis omnino obtectis, foliis patentibus deflexisve anguste ovali-linearibus acutis basi in petiolum vaginantem leviter aut vix angustatis supra nitidulis setulis albidis rigidis arcte appressis conspersis subtus molliter argyreo-tomentosis, cymis racemiformibus axillaribus bracteatis plurifloris, bracteis lineari-lanceolatis, pedicellis calyce multo brevioribus, corollæ hypocrateriformis tubo calyce 2–3-plo longiore lobis limbi obovato-rotundatis, fauce nuda, puberula, antheris inclusis fere ad apicem tubi insertis, nuculis (juvenilibus) oblique ovoideis parce hirtis.

Hab. China: Mongtse, Yunnan, Limestone crags at 6000 ft.; observed at one spot only, *Hancock* (No. 28).

Folia $3\frac{1}{2}$–5 poll. longa, 3–4 lin. lata. *Bracteæ* 6–9 lin. longæ. *Calyx* 5-partitus, segmentis linearibus subæquilongis erectis. *Corollæ* tubus cylindricus, superne leviter gradatim dilatatus, 10–12 lin. longus; limbus cæsius $\frac{3}{4}$–1 poll. diam. *Antheræ* oblongæ, inappendiculatæ. *Stigma* capitellatum, bilobulatum.

This fine addition to a widespread and familiar genus in habit reminds one of the South European *L. rosmarinifolium*, of which it may be regarded as a glorified representative, worthy of the Celestial Empire, as well as worthily commemorating the important service rendered to our knowledge of the botany of China, which we owe to Mr. Hancock.—D. Oliver.

Fig. 1. Pistil and part of calyx. 2. Corolla-tube laid open. *Both enlarged.*

M. J. Cannell lith.

Cymbidium trianæum. Wedd.

Plate 2458.

CYNOGLOSSUM TRIANÆUM, *Wedd.*

Boragineæ. Tribe Borageæ.

C. trianæum, *Wedd. Chloris Andina*, ii. 90; caule florifero erecto folioso inferne glabrato, foliis elongato-ovalibus basi in petiolum alatum semiamplexicaulem angustatis inferioribus plus minus decurrentibus apice acuminatis supra margine excepto glabratis subtus appresse strigosis, racemis sæpe simplicibus inferne bracteatis elongatis laxis, floribus longiuscule pedicellatis, pedicellis demum infra apicem recurvis ebracteatis v. inferioribus extra-axillaribus, calycis strigosi segmentis ovatis, corollæ tubo calycem subæquante limbo quam tubo longiore, profunde 5-fido segmentis obovato-rotundatis, fornicibus brevibus obtusis, nuculis dorso undique glochideo-echinatis.

Hab. South America: Colombia and Ecuador, in various localities at an elevation of 9000–10,000 feet, *Triana; Purdie; Spruce; Jameson; Goudot; White.*

Herba 1–2-pedalis. *Folia* cum petiolo alato 4–8 poll. longa. *Racemi* terminales v. laterales; pedicelli fructiferi 1–1¼ poll. longi. *Flores* 4-6 lin. diam., 'cærulei fauce lutescentes' (*Spruce*); 'pallide violacei roseo tincti' (*White*). *Fructus* maturus ½ poll. diam.

A number of specimens of this plant have been many years in this herbarium without specific determination, but a pencil-note in the handwriting of the late Mr. Ball suggests comparison of this plant with the *Cynoglossum* described above; and I think there can be no doubt of the identity of our specimens with the plant described by Dr. Weddell, as pointed out to me by Mr. C. H. Wright, of the Herbarium staff. It is interesting as presenting much in common with well-known species of the Old World to which it would seem to be more nearly allied than to species known to us from North or South America.—D. Oliver.

Fig. 1. Pistil and part of calyx. 2. Corolla laid open. 3. Views of anther. 4. Nutlet, dorsal view. 5. Inner face of the same. 6. Stellate appendages of nutlet. *All enlarged.*

M. S. del. et lith.

Carallia borneensis, Oliv.

Plate 2459.

CARALLIA BORNEENSIS, *Oliv.*

Rhizophoreæ. Tribe Legnotideæ.

C. borneensis, *Oliv.* (*sp. nov.*); foliis ellipticis breviter cuspidatis supra medium obscure serrulatis, glaberrimis nervis primariis utrinque 7–9, cymis paucifloris (sæpius 3-floris) in axillis foliorum superiorum pedunculatis, floribus breviter pedicellatis, calycis campanulati 6-fidi lobis ovato- v. deltoideo-lanceolatis acutis erectis, petalis calycem paulo superantibus late unguiculatis, lamina subreniformi v. late deltoidea plus minus fimbriata basi utrinque auriculata auriculis arcte inflexis conduplicata stamen antepositum amplectente, staminibus biseriatis atque petalis extra discum carnosum sulcatum omnino positis, ovario omnino infero 6-loculare (v. dissepimentis interdum tenuissimis v. imperfectis), ovulis 12 geminatim circa axin dispositis.

Hab. North Borneo: East coast, *Creagh*; Labuan, *Motley*.

Folia $2\frac{1}{2}$–$3\frac{1}{2}$ poll. longa, 1–$2\frac{1}{4}$ poll. lata, epunctata; petiolus 3–4 lin. longus. *Stipulæ* 4 5 lin. longæ, lanceolatæ, caducæ. *Flores* 3 lin. diam. *Antheræ* parvæ, ellipticæ, inappendiculatæ, dorso affixæ. *Stylus* simplex, petala superans; stigma terminale, capitellatum.

The above description rests upon excellent specimens presented by Governor Creagh. Mr. Motley's specimens I believe to be identical. The leaves of the latter are irregularly and darkly blotched on the under surface. Those of *Carallia celebica*, Blume, with which Mr. Bentham identified Mr. Motley's specimens in his 'Synopsis of Legnotideæ' (*Journ. Linn. Soc.* iii. 75), are pretty uniformly black-punctate. His identification, now that we possess the type, unknown to Mr. Bentham, I cannot coincide in on other grounds. Blume's *C. multiflora*, moreover, from Borneo, if rightly represented by a garden specimen determined by Miquel, is a different plant from the present. The cymes in *C. borneensis* all arise from the axils of the uppermost pair of leaves only, and so are quasi-terminal.—D. Oliver.

Fig. 1. Part of inflorescence with an expanded flower. 2. Vertical section of a flower. 3. Petal. 4. Views of anther. 5. Ovary in cross-section. *All enlarged.*

M.S. del. et lith.

Dombeya arabica, Baker

Plate 2460.

DOMBEYA ARABICA, *Baker*.

Sterculiaceæ. Tribe Dombeyeæ.

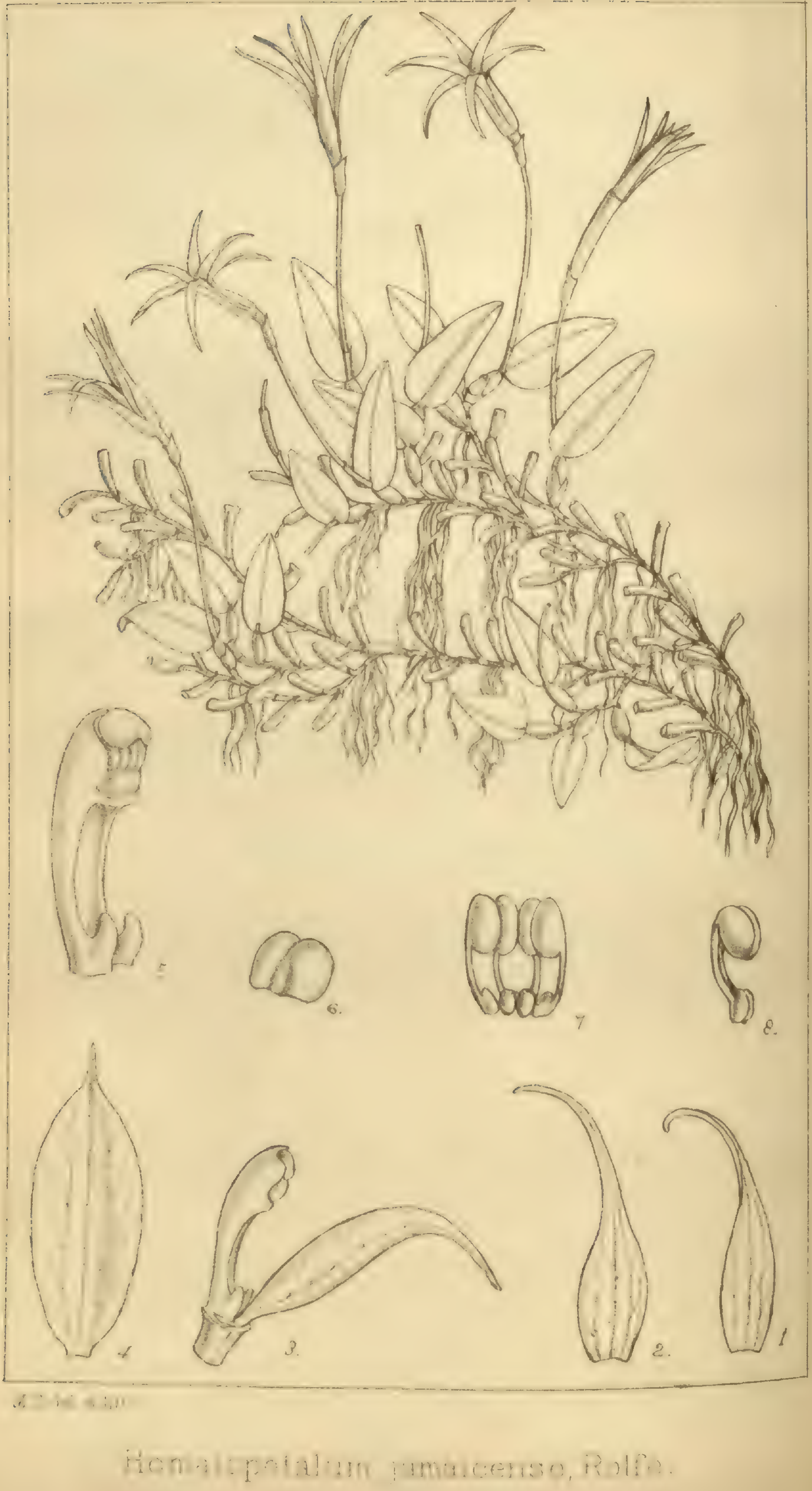
D. arabica, *Baker in Kew Bulletin*, 1895, 315; novellis foliisque dense stellato-tomentosis, foliis cordatis repando-lobatis inæqualiter eroso-dentatis subtus prominenter quinquenerviis lamina in ramulis floriferis petiolo longiore, inflorescentia in axillis superioribus breviter pedunculata dense tomentosa, cymis irregulariter fasciculatis, bracteis linearibus, pedicellis inferioribus alabastris longioribus, calycis profunde 5-fidi segmentis ovato-lanceolatis acuminatis, petalis calycem duplo superantibus ellipticis apice plus minus caudato-acuminatis, staminibus, circiter 15 basi brevissime coalitis glabris, staminodiis anguste ovalibus integris stamina superantibus, ovario globoso stellato-tomentoso.

Hab. South Arabia: Hadramaut, *Dr. Hirsch* (No. 170).

Folia synanthia $2\frac{1}{2}$–$3\frac{1}{2}$ poll. longa atque lata. *Inflorescentia* petiolo longiore. *Bracteolæ* calyce dimidio breviores, lineari-lanceolatæ. *Petala* basi angustata, fere æquilatera. *Antheræ* rotundatæ, dorsifixæ, loculis parallelis.

The only specimen seen by us, and here figured, was included in a collection of Hadramaut plants entrusted by Dr. Schweinfurth to this herbarium for comparison with collections recently received at Kew from other sources. The flowers, unfortunately, are not in a very good state for analysis. The stipules also I must leave uncertain.—D. Oliver.

Fig. 1. Stellate hairs of leaf. 2. Petal. 3. Stamens and staminode. 4. Pistil. *All enlarged.*



Hemipetalum pumilionense, Rolfe.

Plate 2461.

HOMALOPETALUM JAMAICENSE, *Rolfe.*

Orchideæ. Tribe Epidendreæ.

Homalopetalum, *Rolfe* (*gen. nov.*). *Sepala* æqualia, libera, conniventia. *Petala* sepalis conformia, æqualia. *Labellum* petalis subconforme, liberum, indivisum. *Columna* clavata, semiteres, incurva, basi utrinque in auriculas falcato-oblongas producta, apoda, clinandrio marginato, rostello ovato-oblongo descendente. *Anthera* terminalis, opercularis, convexa, loculis 2 distinctis, septo longitudinali imperfecte 2-locellatis ; pollinia perfecta 4, cerea, per paria in loculis segregata, parallele compressa, appendiculis lineari granuloso-viscosis a basi marginibus applicita connexa, additis in quoque loculo polliniis 2 parvis v. imperfectis, ab apice appendicularum descendentibus.

H. jamaicense, *Rolfe* (*sp. unica*) ; rhizomate repente, pseudobulbis oblongis v. obovato-oblongis truncatis monophyllis, foliis sessilibus oblongis v. ovato-oblongis subobtusis carnosis, pedunculis terminalibus gracilibus, bracteis tubuloso-spathaceis subacutis carinatis, sepalis petalisque lineari-lanceolatis acuminatis concavis, labello subconformi marginibus involutis, disco lævi.

Hab. Jamaica : Blue Mountains, in woodland, above Abbey Green coffee plantation, at 4000–5000 ft., growing sparingly on trunks of trees, *W. Harris.*

Pseudobulbi 2–3 lin. longi. *Folia* 4–6 lin. longa, 2-2½ lin. lata. *Pedunculi* 1 poll. longi. *Bracteæ* 1 lin. longæ. *Sepala*, *petala* et *labellum* 6–7 lin. longa. *Columna* 2 lin. longa.

A remarkable little plant with creeping rhizomes, but in other respects closely resembling the Brazilian *Pinelia hypolepta*, Lindl., in habit. The structure of the flower, however, is quite different, the six perianth segments being nearly alike in shape, and the anther and pollinia almost as in *Tetramicra*. The staminodes, instead of being united with the median petal and forming the side lobes of the lip, are partially united to the base of the column, where they form a pair of falcate-oblong, erect auricles or teeth. The genus may be placed next to *Tetramicra*. The name refers to the similar perianth segments.

Fig. 1. Sepal. 2. Petal. 3. Lip and column. 4. Lip flattened out. 5. Column still more enlarged. 6. Anther-cap. 7. Group of pollinia. 8. One pair of pollinia. *All enlarged.*

M.S. del. et lith.

Elæocarpus hainanensis, Oliv.

Plate 2462.

ELÆOCARPUS HAINANENSIS, *Oliv.*

Tiliaceæ. Tribe Elæocarpeæ.

E. (Monocera) hainanensis, *Oliv. (sp. nov.)* ; arbuscula glabrata foliis apices ramulorum versus aggregatis anguste ovalibus acutis basi in petiolum gradatim angustatis serrulatis, racemis axillaribus folio brevioribus sæpius 2–3-floris conspicue bracteatis, bracteis sessilibus ovatis parce serratis persistentibus, pedicellis longiusculis bractea 2–4-plo longioribus, sepalis anguste lineari-lanceolatis acuminatis atque petalis cuneato-obovatis multifidis fere æquilongis, toro incrassato tomentello, antheris apice longe aristatis, ovario 2-loculare, fructibus elongato-ovalibus lævibus apice productis 1-spermis.

Hab. China: Island of Hainan, *A. Henry* (No. 11); Chinese collector employed by *C. Ford* (No. 439).

Rami teretes, glabrescentes. *Folia*, 3–4½ poll. longa. ¾–1 poll. lata ; petioli 6–9 lin. longi. *Bracteæ* 4–6 lin. longæ. *Pedicelli* 1–1½ poll. longi. *Flores* 1½ poll. diam. *Sepala* 9 lin. longa. *Petala* inferne extus sericea, intus basi tomentosa. *Stamina* filamentis brevibus, arista terminali loculis æquilongis. *Fructus* 1–1⅓ poll. longus, 4–6 lin. diam.

A very interesting addition to this large genus ; allied to *E. Mastersii*, Pierre. Singular in the very few flowers in the racemes and the conspicuous, more or less persistent leafy bracts.—D. Oliver.

Fig. 1. Petal. 2. Stamen. 3. Pistil. 4. Cross-section of ovary. 5. Seed. *All except 5 enlarged.*

M.S del. et lith.

Pterygiella nigrescens, Oliv.

Plate 2463.

PTERYGIELLA NIGRESCENS, *Oliv.*

Scrophularineæ. Tribe Euphrasieæ.

Pterygiella, *Oliv.* (*gen. nov.*) *Calyx* ebracteolatus, campanulatus, 5-fidus, lobis deltoideo-ovatis acutis, æstivatione reduplicato-valvatis. *Corolla* bilabiata, subpersonata, calycem superans ; labio postico concavo v. subgaleato, apice emarginato, marginibus revolutis ; labio antico 3-lobo, lobis rotundatis, subæqualibus, palato bifido tomentello ; tubo subtus plicatim bisulcato. *Stamina* 4, inclusa, infra medium corollæ inserta ; filamenta inappendiculata, glabra ; antheræ biloculares, laxe molliter pilosæ, loculis parallelis basi obscure mucronulatis. *Ovarium*, ovoideum, biloculare, loculis inæqualibus, ovula numerosissima ; stylus longiusculus ; stigma oblique inæqualiter bilobatum. *Capsula* (in spec. unic.) nondum maturata.—Herba *erecta, parum ramosa, caule fusco-puberulo, anguste quadrialato.* Folia *linearia, acutiuscula, integra, patentia, plus minus puberula v. primum rubiginoso-tomentella.* Flores *in racemos terminales dispositi, brevissime pedicellati, bracteati ; bracteæ lineares, calyce breviores.*

P. nigrescens, *Oliv.* (*sp. unica*).

Hab. China : Mountain wastes, Mongtse, Yunnan, *Hancock.*

Herba 1½–2-pedalis. *Folia* ¾–1 poll. longa, 1-1½ lin. lata. *Calyx* semipollicaris, lobis intus pubescentibus extus parce puberulus. *Corolla* 9–10 lin. longa, limbo extus parce hirtello. *Stamen* posticum 0. *Ovarium* atque stylus pubescens.

A very interesting addition to a group of *Euphrasieæ* already represented in Eastern Asia by a few peculiar endemic forms, to none of which does our plant seem to me to be generically related. Mr. Hancock describes the flowers as lurid brown. The whole plant, like some of its allies, becomes dark in drying. In æstivation, so far as I am able to make out, the lateral margins of the upper lip of the corolla are narrowly overlapped by the lateral lobes of the lower lip, the median lobe of which is interior.—D. Oliver.

Fig. 1. Part of calyx and pistil. 2. Corolla laid open. 3. Views of anther. 4. Cross-section of ovary. *All enlarged.*

M S.del et lith

Dicoma quinquenervia, Baker.

Plate 2464.

DICOMA QUINQUENERVIA, *Baker.*

Compositæ. Tribe Mutisiaceæ.

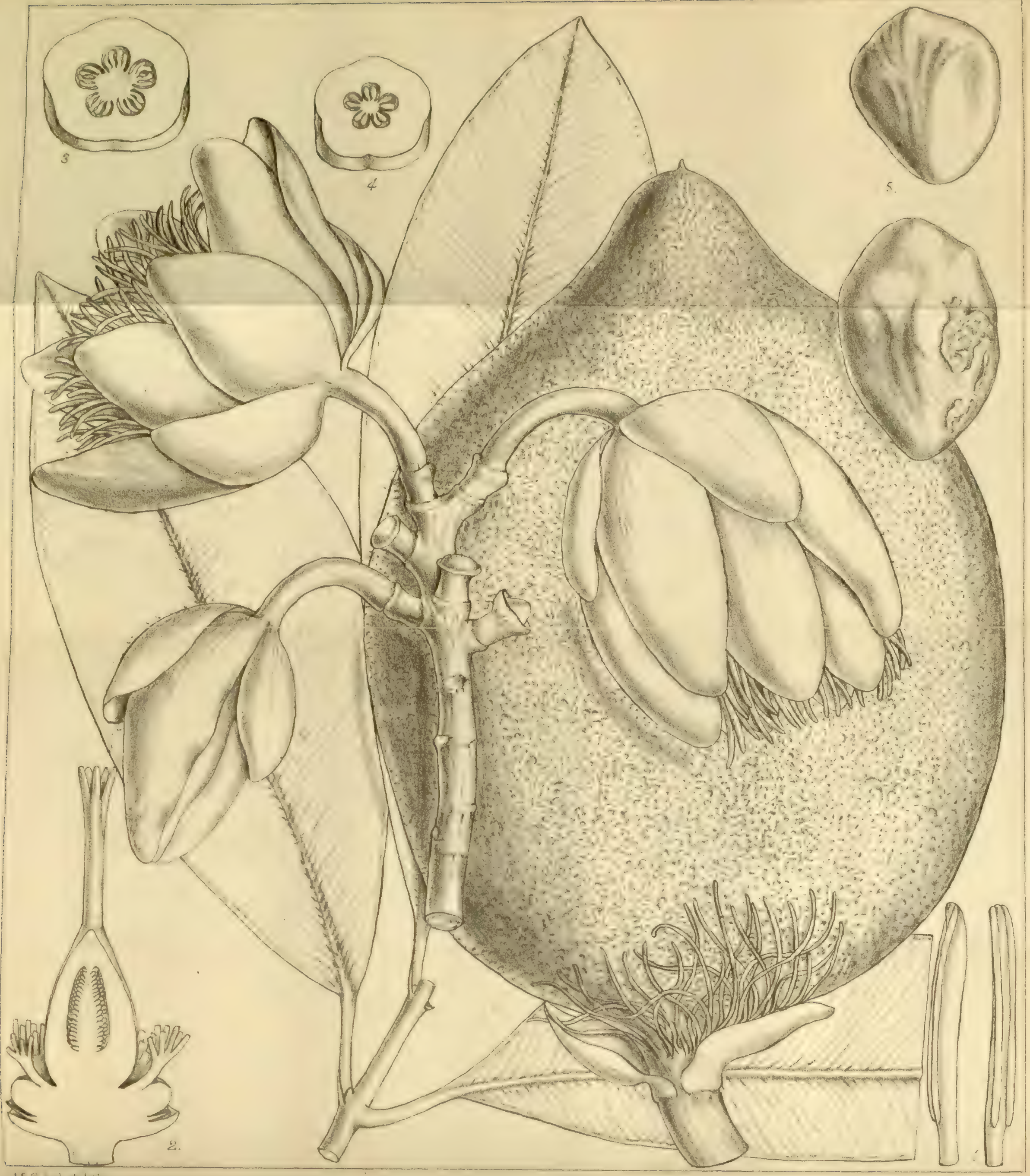
D. quinquenervia, *Baker in Kew Bulletin*, 1895, 290 ; herba perennis, caule erecto simplice striato primum parce lanuginoso mox glabrato, foliis anguste ovalibus utrinque angustatis acutis basi caulem longe vaginantibus integris v. obsolete denticulatis 5–7-nerviis supra glabris reticulatis subtus appresse argyreo-lanatis, capitulis, majusculis subsessilibus 5–8 apicem versus caulis aggregatis, involucri albidi campanulato-turbinati squamis rigidiusculis glabris laxe adpressis exterioribus brevioribus et intermediis elongatis disco dimidio longioribus omnibus linearibus gradatim graciliterque acuminatis interioribus brevioribus absconditis disco brevioribus lineari-oblongis acutatis, receptaculo foveolato.

Hab. South Tropical Africa : hills near the Chama River, Mwero, west of Lake Tanganyika, *Carson.*

Caulis bipedalis, strictus. *Folia* coriacea, inferiora recurva v. patentia, superiora stricte erecta, cum vagina cylindrica 5–8 poll. longa, inferiora $\frac{3}{4}$-$1\frac{1}{2}$ poll. lata. *Capitula* homogama $1\frac{1}{2}$ poll. diam. *Involucri* squamæ intermediæ longiores, $1\frac{1}{4}$–$1\frac{1}{2}$ poll. longæ. *Corolla* tubulosa, 5-fida, segmentis linearibus. *Antheræ* apice connectivo lineari-oblongo acuto productæ, basi longe sagittatæ, caudis setis adscendentibus instructis. *Ovarium* sericeum. *Pappus* 2–4-seriatis ; setæ exteriores breviores, interiores corollæ fere æquilongæ, sparse plumosæ.

A very fine addition to the genus, conspicuously different from a few species which resemble it at first sight in its deeply sheathing leaves. The capitula in size and disposition on the stem are similar to those of *D. sessiliflora*, Harv.—D. Oliver.

Fig. 1. Inner bract of involucre. 2. Flower. 3. Pappus-bristle. 4. Anthers. 5. Young stigma. *All enlarged.*



M.S. del et lith

Pentadesma butyracea., Sabine

Plate 2465.

PENTADESMA BUTYRACEA, *Don.*

GUTTIFERÆ. Tribe MORONOBEÆ.

P. butyracea, *Don, Gen. Syst.* i. 619; foliis coriaceis nitentibus petiolatis oblongo-ellipticis oblongis v. oblanceolatis breviter acuminatis v. obtusiusculis, venis primariis numerosis parallelis, floribus amplis speciosis ad apices ramulorum (3–5–7) aggregatis, pedicellis validis sæpius decurvis, sepalis 5 coriaceis 2 exterioribus brevioribus ovatis 3 interioribus petala æquantibus ellipticis, petalis oblique obovatis basin versus incrassatis, staminibus indefinitis 5-adelphis, filamentis mox liberis gracilibus, superne in connectivo leviter incrassatis, antheris adnatis 2-locularibus elongatis loculis angustissimis, ovario ovoideo in stylum validum æquilongum apice 5-lobatum angustato, ovulis in loculo plurimis superpositis, baccis magnis corticosis ovoideis oligo- v. polyspermis.—OLIVER, *Fl. Trop. Afr.* i. 164.

HAB. W. Tropical Africa: Sierra Leone, southward to the equator, *various collectors.*

Arbor 30–70 pedalis, glaberrima. *Folia* 5–8 poll. longa v. in ramis sterilibus 10–12 poll. longa, $1\frac{3}{4}$-$2\frac{3}{4}$ poll. lata; petiolus 3–9 lin. longus. *Flores* 3–4 poll. diam.; sepala exteriora $1\frac{1}{4}$–$1\frac{1}{2}$ poll. longa; petala 2 poll. longa; stamina petala æquantia; ovarium 9 lin. longum. *Bacca* ad 6-poll. longa, 4–5 poll. diam.

This is the 'Butter and Tallow' tree of Sabine's paper on the 'Edible Fruits of Sierra Leone,' in the *Transactions of the Horticultural Society*, v. (1824), 457; the 'Kanya' of Prof. E. Heckel in his monograph, *Les Kolas Africains*; and the 'Kamoot' tree of the Rev. J. A. Cole, whose excellent specimens in flower, received from the Colonial Secretary of Sierra Leone, are just to hand, and which, with previous material, enable us to give a satisfactory figure of the plant in flower. At the time I described the Guttiferæ for the *Flora of Tropical Africa* our material as to the flowers and inflorescence was very imperfect, and, quoting a previous writer, I described, in inverted commas, the flowers as 'terminal, solitary.' The fruit, on a reduced scale, a seed and leaf, with some microscopical sections of tissues, are figured by Heckel (*l.c.*). The seeds vary in form considerably from mutual pressure as well as in number; indeed, from one or two to an indefinite number; the ovules are, of course, numerous. The fatty matter contained in the seeds affords the vegetable 'Butter,' *beurre de Kanya* of Heckel.—D. OLIVER.

Fig. 1. Stamens. 2. Vertical section of pistil and lower part of andrœcium. 3 and 4. Sections of the ovary at different levels, the latter the higher. 5. Seeds. *All except 5 enlarged.*

M.S.del.et lith

Ischnochloa Falconeri, Hook. f.

Plate 2466.

ISCHNOCHLOA FALCONERI, *Hook. f.*

Gramineæ. Tribe Andropogoneæ.

Ischnochloa, *Hook. f.* (*gen. nov.*) *Spiculæ* minimæ, unifloræ, per paria in spicam terminalem simplicem dispositæ, ambæ hermaphroditæ, lanceolatæ, aristatæ, altera sessilis callo ciliolato, altera longe pedicellata. *Glumæ* 3 : i. lineari-oblonga, subcoriacea, dorso compressa 5–6-nervis, apice truncata, hyalina, marginibus incurvis, carinis ciliolatis ; ii. oblonga, obtusa, truncata, 3-nervis, apicem versus truncatum ciliata ; iii. brevior et angustior, hyalina, 2-loba, lobis subulatis ; arista sinu glumæ inserta, capillaris, geniculata, exserta. *Lodiculæ* 2, cuneatæ. *Stamina* 3, antheris oblongis. *Styli* breves, liberi, stigmatibus plumosis. *Caryopsis* subfusiformis, facie sulcata.—Gramen *annuum? pusillum, flaccidum, glabrum, decumbens, caulibus filiformibus, internodiis omnino vaginatis.* Folia *parva, elliptico-oblonga, utrinque acuta ; vaginæ breves ; ligula brevis, membranacea, longe pilosa.* Spicæ *gracillimæ, paucifloræ, pedunculis vaginis foliorum inclusis ; rachis filiformis, compressa, marginibus incrassatis, inarticulata.* Spiculæ *virides, remotæ.*

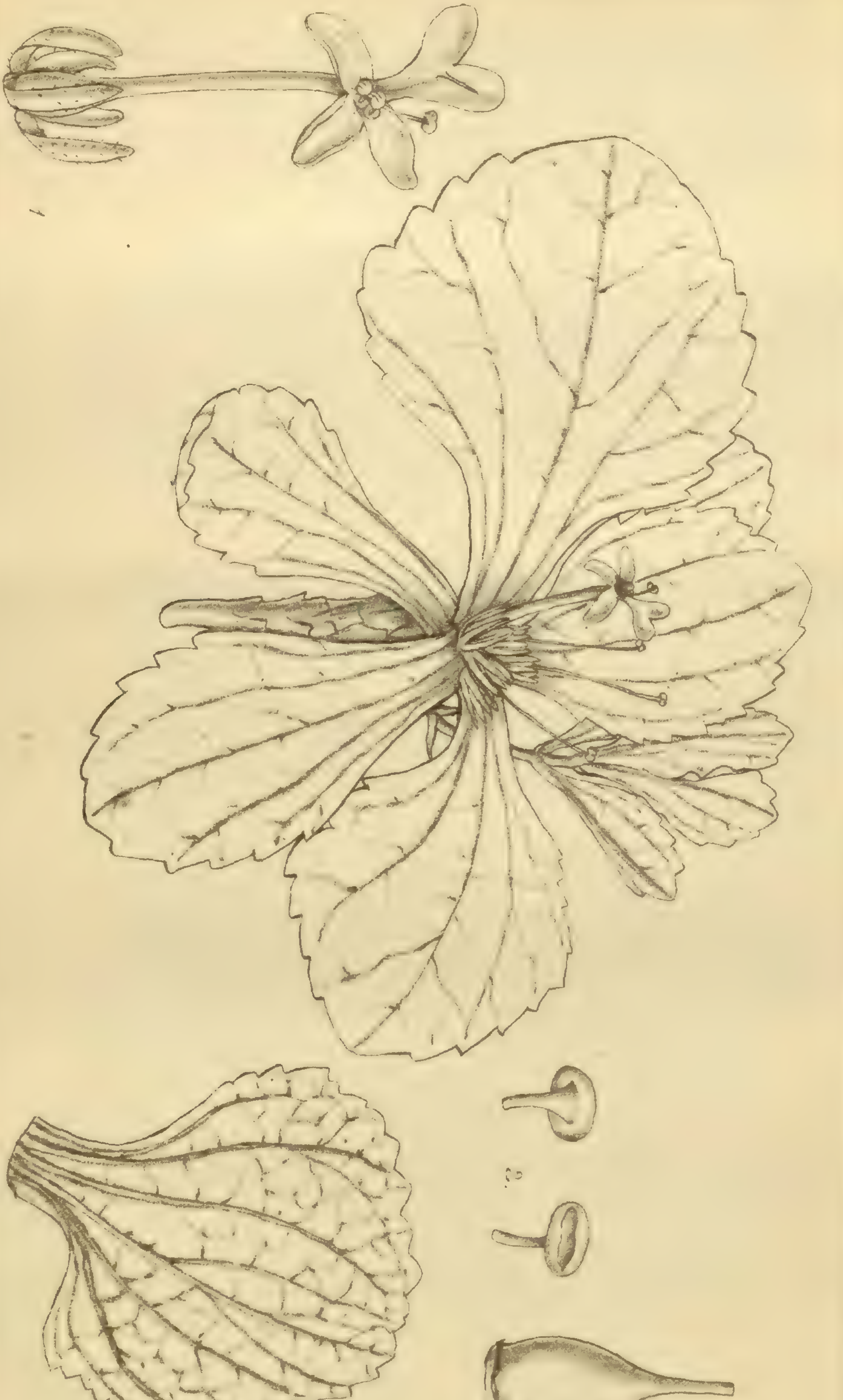
S. Falconeri, *Hook. f* (*sp. unica*).

Hab. North-Western Himalaya, growing amongst moss, *Falconer.*

Caules 6–8-pollicares, subramosi, undique foliosi. *Folia* 3–9 lin. longa, plana, acuta v. acuminata, nervis tenuibus ; vaginis sulcatis. *Spicæ* $\frac{1}{2}$–1 poll. longæ, pedunculo capillari. *Gluma* i. nervis 2, lateralibus percursis, cæteris infra apicem glumæ evanidis ; ii. nervis lateralibus infra apicem glumæ cum intermedio percurrente anastomosantibus.

A very remarkable grass, with the habit of an *Arthraxon*, strongly resembling *A. microphyllus*, but differing totally from that grass in structure and in the inarticulate flattened rachis of the simple spike, in the bisexual awned pedicelled spikelet, and in the absence of the third glume of that genus. Unfortunately the specimens are unaccompanied by any note of locality, which is presumably the North-western Himalaya, where Dr. Falconer travelled extensively and collected largely.—J. D. H.

Fig. 1. Ligule. 2. Portion of spike with sessile and pedicelled spikelets. 3. Glume i. of sessile spikelet spread out. 4 and 5. Glumes ii. and iii. of ditto. 6. Anther. 7. Ovary and lodicules. *All enlarged.*



M. S. del. et lith.

Orecsoler. unguiculatus Hemsl.

Plate 2467.

OREOSOLEN UNGUICULATUS, *Hemsl.*

Scrophularineæ.

O. unguiculatus, *Hemsl.* (*sp. nov.*); species habitu foliisque *O. Wattii* simillima sed corolla valde inæqualiter bilabiata sat diversa; glabrescens, subacaulis, foliis subrosulatis crassis subcarnosis ovato-rotundatis vel fere orbicularibus inferne subito constrictis subpetiolatis grosse crenato-dentatis a basi 5–7-nervis nervis venisque crassis laxe reticulatis subtus præsertim conspicuis, floribus paucis in axillis foliorum subsessilibus, calycis segmentis brevibus fere liberis lineari-oblongis subacutis, corollæ tubo gracillimo vere cylindrico labio superiore unguiculato bifido labio inferiore æqualiter trilobato lobis angustis oblongis obtusis, staminibus 4 vix exsertis, staminodio brevi subulato e labio superiore prope sinum enato, ovario glabro stylo filiformi stamina superante.

Hab. Central Tibet: chiefly from Gooring Valley, 30° 12′ N., 90° 25′ E., at about 16,500 feet, *St. George R. Littledale*, July and August 1895.

Folia maxima 2 poll. diametro. *Flores* circiter pollicares. *Corollæ* labium superius inferius fere duplo superans.

In foliage this is so like *O. Wattii*, Hook. f. (see plate 2271), that it might be taken for the same, especially as of both species the material for comparison is very scanty. But the very unequal lips of the corolla and the almost included stamens are very different. Yet the possibility of their being sexual forms of the same species should not be overlooked.—W. Botting Hemsley.

Fig. 1. A flower. 2. Anthers. 3. Ovary. *All enlarged.*

M. S. del et lith

Corydalis Boweri, Hemsl.

Plate 2468.

CORYDALIS BOWERI, *Hemsl.*

Fumariaceæ.

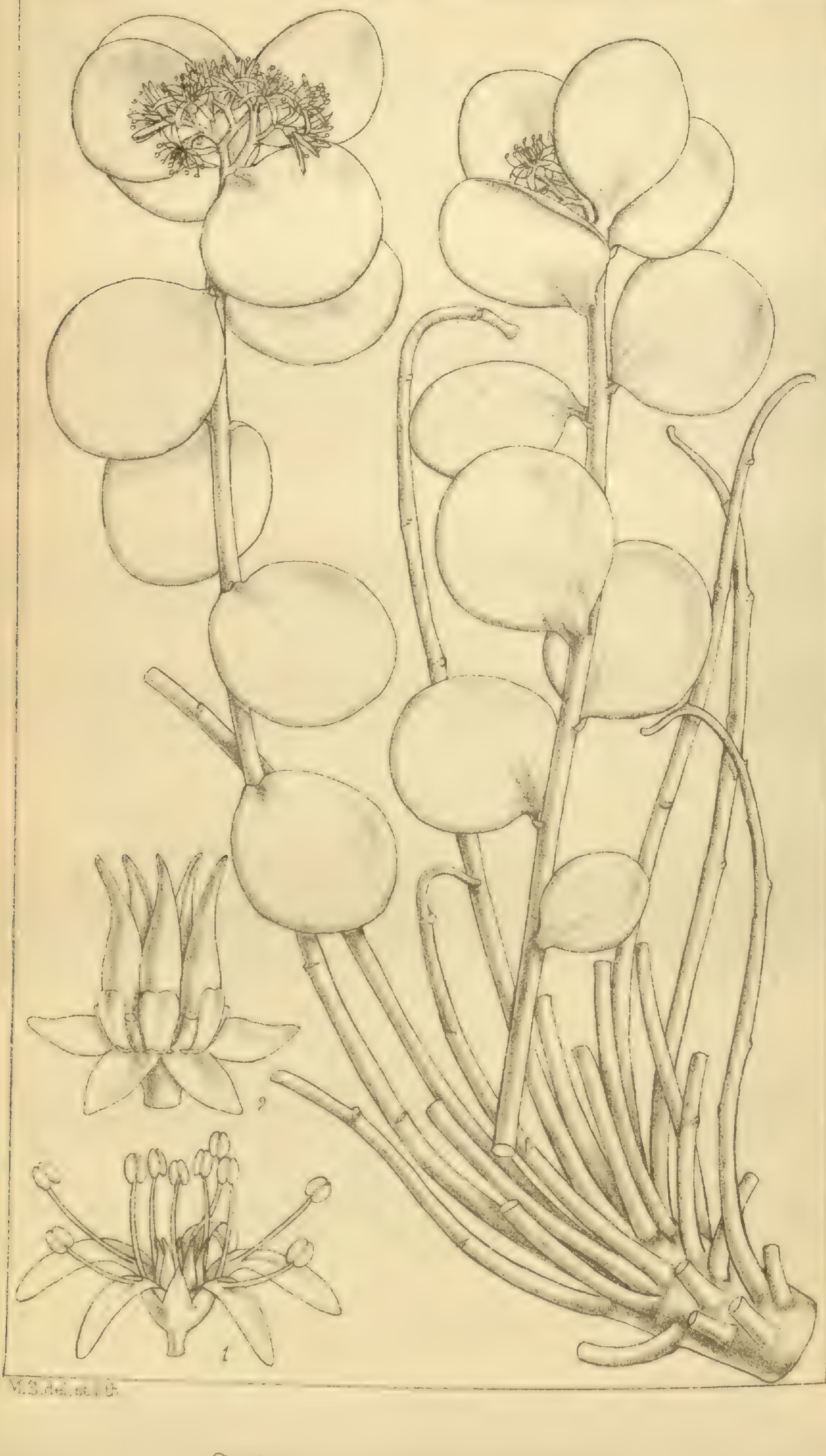
Corydalis Boweri, *Hemsl. in Journ. Linn. Soc.* xxx. 108 ; cæspitosa, pusilla, undique glabra, caule dense ramoso, foliis radicalibus longe petiolatis bi-ternatisectis segmentis ultimis integris vel emarginatis, foliis caulinis spathulato-flabellatis multilobulatis vel alte fimbriatis lobulis angustis apice seta longiuscula instructis, bracteis foliis simillimis sed minoribus, floribus minutis breviter pedicellatis, sepalis minutis inæqualiter trilobulatis lobo intermedio irregulariter pauci-dentato, petalo inferiore anguste cochleariformi, petalis lateralibus spathulatis cum superiore alte connatis, calcari lato obtuso quam lamina longiore, staminum adelphiis infra medium subito dilatatis ovarium amplectentibus, ovario 4 ovulato stylo stamina æquante stigmate trilobato, capsula oblongo-cylindrica sæpius 4-sperma pedunculo arcte recurvo stylo persistente capsulæ arcte recurvo.

Hab. Central Tibet : Gooring Valley, 30° 12′ N., 90° 25′ E., at about 16,500 feet, *St. George R. Littledale*, July and August 1895.

Herba 1–2 poll. *Folia radicalia* cum petiolo elongato 12–18 lin. longa ; caulina 4–12 lin. longa. *Flores* circiter 4 lin. longi. *Capsula* $1\frac{3}{4}$–2 lin. longa. *Pedicelli* fructiferi circiter $1\frac{1}{2}$ poll. longi.

When I first described this plant (*Journ. Linn. Soc.* xxx. 108) I noted its close affinity with *C. mucronifera*, Maxim. (*Fl. Tang.* i. p. 51, t. 24, figs. 19–21), and further investigation inclines me to the belief that it will prove the same, though the details of the flower are not the same as those given by Maximowicz.—W. Botting Hemsley.

Fig. 1. Radical leaf. 2 Upper part of cauline leaf. 3. Branch. 4. Flower. 5. Sepal. 6. Calyx and pistil. 7. Phalange of stamens. 8. Capsule. 9. Seed. *All enlarged.*



Sedum rotundatum, Hemsl.

Plate 2469.

SEDUM ROTUNDATUM, *Hemsl.*

Crassulaceæ.

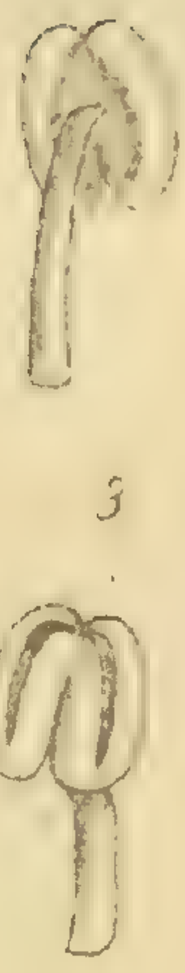
S. (§ **Rhodiola**) **rotundatum**, *Hemsl.* (*sp. nov.*); glabrum rhizomate crassissimo colorato multicauli, caulibus subcarnosis erectis simplicibus, internodiis quam folia brevioribus, foliis sessilibus carnosis oblongo-rotundatis vel interdum vere orbicularibus integris vel interdum obscurissime lobulatis, cymis parvis paucifloris, floribus (masculinis tantum visis) rubris parvis, sepalis carnosis brevibus ovato-oblongis obtusissimis, petalis linearibus obtusis, filamentis filiformis, carpellis fatuis validis.

Hab. Central Tibet: Gooring Valley, 30° 12′ N., 90° 25′ E., at about 16,500 feet, *St. George R. Littledale*, July and August 1895.

Rhizoma 1 poll. crassum. *Caules* circiter 6 poll. alti. *Folia* ½–1 poll. diametro. *Cymæ* fl. masc. vix 6 lin. diametro. *Sepala* 1 lin. longa. *Petala* 2–2¼ lin. longa.

This is most nearly allied to *Sedum Rhodiola*, from which it differs in having orbicular entire leaves.—W. Botting Hemsley.

Fig. 1. Flower, enlarged. 2. The same from which the petals and stamens have been removed, much more enlarged, showing the glands and empty carpels.



M.S. del. et lith.

Nepeta decolorans Hemsl.

Plate 2470.

NEPETA DECOLORANS, *Hemsl.*

Labiatæ. Tribe Nepeteæ.

N. decolorans, *Hemsl.* (*sp. nov.*) ; fere omnino sericeo-hirsuta, albida, caulibus brevissimis adscendentibus, internodiis 2–3 inferioribus folia excedentibus, foliis radicalibus non visis, caulinis crassis mollibus rugosis venis crassis conspicuis brevissime petiolatis vel sessilibus rotundatis interdum fere orbicularibus grosse crenatis basi nunc subcuneatis nunc subcordatis inferioribus minoribus distantibus superioribus floralibus majoribus confertissimis, pedunculis subtrifloris pedicellisque brevissimis, bracteolis setiformibus, calyce intus extusque villoso insigniter bilabiato, labio superiore dimidio longiore brevissime tridentato, inferiore bifido dentibus omnibus acutis, corollæ labio superiore bilobato lobis rotundatis, labii inferioris lobis lateralibus dentiformibus, staminibus 2 posterioribus longioribus labium æquantibus, 2 anterioribus vix e tubo exsertis, nuculis glabris oblongis.

Hab. Central Tibet : Gooring Valley, 30° 12′ N., 90° 25′ E., at about 16,500 feet, *St. George Littledale*, July and August 1895.

Caules 2–3 poll. longi. *Folia* caulina inferiora 2–4 lin. diametro, maxima 1 poll. diametro. *Calyx* circiter 4 lin. longus. *Corolla* 8–9 lin. longa.

This closely resembles *N. pharica*, Prain (*Journ. As. Soc. Beng.* lix. p. 306), from the same region, alike in habit, foliage, and the distinctly two-lipped calyx ; but the leaves are thinner, less rugose, less coarsely crenate ; the flowers are larger, and the upper lip of the calyx is three-toothed, with short deltoid teeth. The flowers when moistened stain a deep blue.—W. Botting Hemsley.

Fig. 1. Flower. 2. Calyx laid open and pistil. 3. Views of anthers. *All enlarged.*

M.S. del. et lith.

Polygonum tibeticum, Hemsl.

Plate 2471.

POLYGONUM (§ ACONOGON) TIBETICUM, *Hemsl.*

Polygonaceæ.

P. tibeticum, *Hemsl.* (*sp. nov.*); perenne, nanum, undique glabrum, caulibus erectis gracilibus lignescentibus pauciramosis, internodiis quam folia brevioribus, stipulis amplis tenuissimis truncatis vel obliquis cito ad basin fissis, foliis brevissime petiolatis crassis vix coriaceis obovato-oblongis marginibus (in siccis) recurvis venis immersis inconspicuis, cymis parvis densis terminalibus brevissime pedunculatis, pedicellis brevissimis, perianthii segmentis 5 valde inæqualibus obovato-spathulatis apice rotundatis stamina superantibus, staminibus 8 inæquilongis hypogynis, disco inter stamina et ovarium carnoso 8-lobato lobis ovoideis, ovario glabro, stylis brevissimis stigmatibus magnis capitatis, nuce ignota.

Hab. Central Tibet: Gooring Valley, 30° 22′ N., 90° 25′ E., at about 16,500 feet, *St. George R. Littledale*, July and August 1895.

Caules 1–12 poll. alti. *Folia* cum petiolo 1–1½ poll. longa. *Cymæ* (2 tantum visæ) 6–9 lin. diametro. *Flores* circiter 2½ lin. diametro.

In foliage this species comes nearest *P. tortuosum*, Don, and in floral structure nearest to *P. paniculatum*, Blume. There are apparently very few species in which there is a largely developed disc between the stamens and the ovary, as in the present species and in *P. paniculatum*. But this character is not confined to the section *Aconogon*. *P. chinense*, Linn. (§ *Cephalophilon*), is represented with a similar disc. In the genus, or section, *Fagopyrum* the stamens alternate with similar fleshy bodies.—W. Botting Hemsley.

Fig. 1. Unexpanded flowers. 2. Expanded flower. 3. Perianth, stamens, and disc. 4. Pistil. *All enlarged.*

M.S. del. et lith

Littledalea tibetica, Hemsl

Plate 2472.

LITTLEDALEA TIBETICA, *Hemsl.*

Gramineæ. Tribe Festuceæ.

Littledalea, *Hemsl.* (*gen. nov.*) *Spiculæ* variabiles, 2–8-floræ, laxe paniculatæ, graciliter pedicellatæ, rachilla inter flores elongata, glabra, juxta flores et supra glumas inferiores articulata. *Flores* grandes, hermaphroditi vel supremo imperfecto. *Glumæ* 2 inferiores vacuæ, inæquales, quam florentes multo minores, ecarinatæ, obtusæ vel truncatæ, simul emarginatæ vel erosæ, muticæ, trinerves, nervis haud excurrentibus lateralibus medium non attingentibus; florentes amplæ, truncatæ vel rotundatæ, supra medium hyalinæ, muticæ, ecarinatæ, demum erosæ, basi insigniter callosæ, 7-nerves, nervis omnibus vix excurrentibus; palea multo minor, bifida, bicarinata. *Stamina* 3. *Lodiculæ* 2, tenues, angustæ, oblongæ, integræ. *Styli* brevissimi, stigmatibus late plumosis. *Caryopsis* immatura hirsuta.—Gramen *ut videtur perenne, pulchrum, erectum, foliis planis brevibus.* Panicula *terminalis, angusta, ramulis sæpissime geminatis pedicellisque capillaribus.* Spiculæ *sæpe geminatæ, altera minore pedicello breviore.*

L. tibetica, *Hemsl.* (*sp. unica*); culmis simplicibus graciliusculis glabris lævibus sæpissime (an semper?) bifoliatis (nodo unico tantum perspicuo) internodio superiore longissime exserto, vaginis laxis glabris vel inferioribus puberulis superioribus apertis, laminis brevibus linearibus subacutis valide striatis utrinque puberulis basi appendice setuliformi utrinque instructis, ligula folii caulini inferioris magna integra vel demum lacerata, folii superioris admodum redacta, paniculæ ramulis sæpius paribus 4, floribus puberulis purpureis.

Hab. Central Tibet: Gooring Valley, 30° 12′ N., 90° 25′ E., at about 16,500 feet, *St. George R. Littledale*, July and August 1895.

Culmi 1½–2 ped. alti. *Lamina* foliorum caulinorum 2-poll. longa, radicalium longior sed culmis multo brevior. *Ligula* bene evoluta 2 lin. longa. *Panicula* 4–5 poll. longa, ramulis ½ 2 poll. longis. *Spiculæ* maximæ pollicares. *Gluma* exterior circiter 3 lin. longa, secunda 4½ lin. longa. *Gluma florens* 6–7 lin. longa, aperta 2 lin. lata. *Palea* circiter 4 lin. longa.

This pretty grass is very near *Glyceria* in structure. Indeed, there are no very decided divergencies; yet the aggregate of the differences seems to fully justify giving it generic rank.—W. Botting Hemsley.

Fig. 1. Portion of leaf with ligule. 2. Spikelet. 3. Flowering glume. 4. Palea. 5. Lodicules and pistil. *All enlarged.*

M. S. del. et lith.

Cardiogyne africana, Bureau

Plate 2473.

CARDIOGYNE AFRICANA, *Bureau*.

Urticaceæ. Tribe Moreæ.

C. africana, *Bureau in DC. Prodr.* xvii. 233 ; *Baill. Hist. Nat. Pl. Madag.* t. 294 ; frutex v. arbuscula sæpe alte scandens, spinosus, foliis petiolatis ellipticis obtusis integris v. apice minute emarginatis subtus canovelutinis parce pubescentibus v. glabratis, capitulis axillaribus solitariis v. geminatis rarius ternis, breviter pedunculatis, ♂ perianthii segmentis obovatis, filamentis demum exsertis, ♀ perianthio clauso turbinato apice velutino, ovario late elliptico compresso, stylo recto, perianthio fructifero obovoideo-turbinato glabro sed ore lobulato velutino, pericarpio incluso obovoideo crustaceo lævi nitente testa separabili papyracea, embryone exalbuminoso cotyledonibus reflexis contortoplicatis radiculam superam vaginantibus.

Hab. East Tropical Africa : Zanzibar, Rovuma, Zambesi, and Shiré Valleys, various localities, *Boivin, Sir J. Kirk, and later collectors.*

Rami laterales sæpius spinescentibus, spinis rectis v. brevioribus axillaribus aphyllis interdum plus minus recurvis. *Folia* in ramis floriferis $1\frac{1}{2}$-$2\frac{1}{2}$ poll. longa, 10–15 lin. lata ; petioli 3–9 lin. longi. *Pedunculi* 2–3 lin. longi. *Capitula florifera* globosa, $\frac{1}{2}$ poll. diam. ; bracteolæ obovatæ, v. late oblongæ, apice obtusæ leviter incrassatæ, albido-tomentellæ. *Capitula fructifera* lignosa, 8–9 lin. diam.

The stamens being inflexed in æstivation removes this interesting plant from the tribe Artocarpeæ, under which, in the genus *Cudrania*, it was first referred in this herbarium, and upon this character, associated with free, not consolidated, pistillate flowers (in which latter character it differs from *Plecospermum*) M. Bureau founded the genus *Cardiogyne*, of which this plant is the only described species. Sir John Kirk first called attention to it thirty years ago in the *Journal of the Linnean Society*, ix. 229, as affording a yellow dyewood. The ripe heads of fruit are edible ; in dried specimens they are indurated and woody. The fruit and seed, unknown to M. Bureau, are here figured from Zambesi specimens, which we owe to Sir John Kirk. The figure cited above, although a very artistic one, contains exceedingly little botanical detail.—D. Oliver.

Fig. 1. Bud, with bracteoles. 2. Male flower. 3. Perianth-lobe and stamen. 4. Portion of female flower – the inflated protuberances are reservoirs of colouring matter. 5. Vertical section of female flower. 6. Seed. 7. Two views of embryo. *All except* 6 *enlarged.*

Duthiæa bromoides, Hack.

Plate 2474.

DUTHIEA BROMOIDES, *Hack.*

Gramineæ. Tribe Aveneæ.

D. bromoides, *Hack. in Verhandl. Zool.-Bot. Ges. Wien*, xlv. (1895), 200 ; perennis, basi vaginis vetustis crebris vestita, culmis simplicibus 1–2-nodis glabris apice scabris longe e vagina summa exsertis, foliorum vaginis infimis apertis cæteris subarctis, ligulis elongatis apice fissis, laminis innovationum filiformiter convolutis setaceo-acuminatis culmorum linearibus plus minusve planis acutis superioribus abbreviatis, racemo oblongo vel secundo compacto 4–6-spiculato, pedicellis brevibus, ut rhachis, scabris sæpe bractea hyalina fultis, spiculis circa 5-floris, rhachillæ articulis (imprimis summo elongato) superne pilosis, glumis vacuis late lanceolatis acuminatis vel mucronatis 7–11-nervibus subæquilongis, floriferis vix vel paulo exsertis obovatis obtuse bilobis 7–11-nervibus interlobos aristatis, arista scabra basi torta, paleæ carinis setaceo-mucronatis, ovario dense setoso, stigmatibus fuscis tenuiter filiformibus stylo subæquilongis, caroypsi (submatura) linearioblonga setosa stylo subpersistente superata.

Hab. Kashmir : Liddar Valley, Sonsal nullah, and above Kainmul, 13,000 feet, *Duthie* (No. 13,155, 13,382).

Culmi $1\frac{3}{4}$–$2\frac{1}{4}$ ped. alti. *Foliorum* innovationum lamina ad 1 ped. longa, culmeorum ad 2 lin. lata ; ligula ad 5 lin. longa. *Glumæ* vacuæ $5\frac{1}{2}$–8 lin. longæ, floriferæ $5\frac{1}{2}$ lin. longæ ; arista 1–$1\frac{1}{4}$ poll. longa.

Another species of this singular genus is *D. oligostachya*, Stapf. It was described and figured by Aitchison as *Avena* (§ *Crithe*) *oligostachya*, Munro, in *Journ. Linn. Soc.* xviii. 108, xix. 193, t. 30. In this the spikelets are 2–3-flowered with a glabrous rhachilla, the empty glumes 5–7-nerved with a broad hyaline border, the flowering glumes bilobed to the middle with apiculate lobes, densely covered with long hairs below the lobes. The gynæceum is essentially the same as in *D. bromoides*, but the style is much shorter than the stigmas. The curious hyaline bracts at the base of the pedicels found in *D. bromoides* are also frequently present in *D. oligostachya*. The resemblance of the latter to certain species of *Danthonia* is so great that it would have to be referred to this genus if it were not for the absence of lodicules and the structure of the gynæceum. This is certainly quite singular in Aveneæ ; still, I think, *Duthiea* must be placed in this tribe rather than in Festuceæ, where Hackel placed it.—O. Stapf.

Fig. 1. Spikelet. 2. Joint of rhachilla. 3. Sterile floret. 4 Flowering glume spread open. 5. Palea. 6. Pistil. 7. Caryopsis. *All enlarged.*

M. S. del. et lith.

Coleus leucophyllus, Baker.

Plate 2475.

COLEUS LEUCOPHYLLUS, *Baker.*

Labiatæ. Tribe Ocimoideæ.

C. leucophyllus, *Baker in Kew Bulletin*, 1895, 292; caule erecto simplice brevissime cano-tomentello, foliis petiolatis subcoriaceis ovato-ellipticis acutis crenato-serratis supra opacis puberulo-tomentellis costa venisque primariis albido-canis subtus albo-tomentosis plus minus reticulatis, cymis pluri- (3–7) floris breviter pedunculatis in paniculam amplam terminalem dispositis, bracteis membranaceis ovatis acutis basi concavis caducis, corollæ tubo basi obliquo medio abrupte refracto, labio superiore erecto obcordato brevi, inferiore elongato cymbiformi postico 4-plo longiore.

Hab. South Tropical Africa: near Mwero, west of Lake Tanganyika, *Carson*.

Caulis 3–4-pedalis. *Folia* $2\frac{1}{2}$–$3\frac{1}{2}$ poll. longa, $1\frac{1}{2}$–$1\frac{3}{4}$ poll. lata; petiolus 4–6 lin. longus. *Panicula* 10–12 poll. longa. *Calyx* profunde 5-fidus, segmento postico cæteris ovatis longiore lanceolato acuto, 2 lateralibus acuminatis, 2 anticis paulo minoribus. *Corolla* 12–15 lin. longa. *Stamina* inclusa; filamenta glabra, inferne coalita.

A noble member of a genus rather largely represented in Tropical Africa.—D. Oliver.

Fig. 1. Portion of leaf showing crowded oil-glands. 2. Calyx and pistil. 3. Corolla. 4. Views of anther. 5. Fruit with one nutlet removed. 6. Nutlet seen from within. *All enlarged.*

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M.S del et lith

PLATE 2477.

AMOMUM CEREUM, *Hook. fil.*

SCITAMINEÆ. Tribe ZINGIBEREÆ.

A. cereum, *Hook. fil. in Kew Journ. Bot.* vi. 295 ; rhizomate late repente, caule foliifero gracili brevi, foliis lorato-lanceolatis chartaceis utrinque glabris basi cuneatis sessilibus ligulis truncatis, spicis 1–2-floris longe pedunculatis, bracteis ovatis obtusis, corollæ lobo dorsali oblongo lateralibus lanceolatis, labello orbiculari-cuneato albo undulato, connectivi lobo centrali parvo deltoideo lateralibus lanceolatis falcatis, fructu ampullæformi glabro haud sulcato, seminibus angulatis.

HAB. West Tropical Africa : Sierra Leone, *Dr. Daniell.*

Folia inferiora pedalia, medio $1\frac{1}{2}$–2 poll. lata. *Corollæ* lobi $1\frac{1}{2}$–2 poll. longi. *Labellum* 18–21 lin. latum. *Fructus* siccus 2 poll. longus, 8–9 lin. diam.—J. G. BAKER.

Fig. 1. Dorsal lobe of corolla. 2. Lateral lobe of corolla. 3. Labellum. *All natural size.* Fig. 4. Stamen with produced connective and style. 5 and 6. Seed. 4 *and* 6 *enlarged.*

M. S. del. et lith.

Amomum citratum, Pereira.

PLATE 2478.

AMOMUM CITRATUM, *Pereira.*

SCITAMINEÆ. Tribe ZINGIBERREÆ.

A. citratum, *Pereira ; Oliv. et Hanb. in Journ. Linn. Soc.* vii. 110 ; rhizomate valido late repente, caule foliifero longissimo, foliis lorato-oblongis cuspidatis utrinque glabris basi inæquilateraliter late rotundatis supra vaginam petiolatis ligulis magnis scariosis ovatis obtusis, spicis globosis sessilibus multifloris, bracteis latissimis scariosis ovatis obtusis, corollæ lobo dorsali oblongo obtuso concavo lateralibus lanceolatis, labello obovato-cuneato pallido rubro valde undulato, connectivi lobo centrali minuto orbiculari lateralibus linearibus erecto-patentibus, fructu ovoideo glabro haud sulcato, seminibus obovoideis angulatis.

HAB. West Tropical Africa : banks of the River Gaboon, *Mann* (No. 1052).

Caulis foliiferus 10-pedalis. *Folia* inferiora 12–15 poll. longa, 2–3 poll. lata. *Spicæ* 3 poll. diam. *Corollæ* lobi 3 poll. longi. *Labellum* 3 poll. longum, $2\frac{1}{2}$ poll. latum. *Semina* 2 lin. longa.—J. G. BAKER.

Fig. 1. Stamen with produced connective and style. 2. Immature fruit crowned with persistent calyx. 3 and 4. Seed enclosed in aril. 5. Seed with aril unrolled. *All except 2 and 3 enlarged.*

M.S del et lith

Amomum giganteum.Oliv. & Hanb.

PLATE 2479.

AMOMUM GIGANTEUM, *Oliv. et Hanb.*

SCITAMINEÆ. Tribe ZINGIBEREÆ

A. giganteum, *Oliv. et Hanb. in Journ. Linn. Soc.* vii. 109; rhizomate valido late repente, caule foliifero longissimo, foliis oblongis vel lorato-oblongis cuspidatis chartaceis utrinque glabris basi rotundatis supra vaginam breviter petiolatis ligulis magnis orbicularibus, caule florifero valido erecto elongato spicato-paniculato, bracteis ovatis obtusis mucronatis, corollæ lobo dorsali magno oblongo concavo lateralibus linearibus, labello obovato-cuneato undulato, connectivi lobo centrali magno quadrato emarginato lateralibus lanceolatis crenatis, fructu ovoideo glabro haud sulcato, seminibus ellipsoideis atrofuscis nitidis.

HAB. West Tropical Africa: Corisco Bay and banks of the Gaboon River, *Mann* (No. 1051).

Caulis foliiferus 15–20-pedalis. *Folia* inferiora interdum bipedalia, 6–8 poll. lata. *Corollæ* lobi $2\frac{1}{2}$ poll. longi. *Labellum* 3 poll. longum, 2 poll. latum. *Fructus* 3 poll. longus. *Semina* $1\frac{1}{2}$ lin. longa. — J. G. BAKER.

Fig. 1. Stamen with produced connective and style. 2. Apex of ovary with stylodia and base of style. 3. Fruit with bracts. 4 and 5. Seed. *All except 3 and 4 enlarged.*

Amomum limbatum. Oliv. & Hanb.

PLATE 2480

AMOMUM LIMBATUM, *Oliv. et Hanb.*

SCITAMINEÆ. Tribe ZINGIBEREÆ.

A. limbatum, *Oliv. et Hanb. in Journ. Linn. Soc.* vii. 110; rhizomate valido late repente, caule foliifero longissimo, foliis lanceolatis cuspidatis basi inæqualibus dorso obscure ferrugineo-pubescentibus, ligulis scariosis truncatis, spicis trifloris subsessilibus, bracteis scariosis ovatis arcte imbricatis mucronulatis, corollæ lobo dorsali oblongo concavo lateralibus lanceolatis, labello purpureo obovato-cuneato, connectivo apice truncato lobis lateralibus linearibus ascendentibus arcuatis, fructu ovoideo glabro haud sulcato, seminibus ellipsoideis fuscis nitidis.

HAB. West Tropical Africa: Fernando Po, *Mann* (No. 1171).

Caulis foliiferus 12–15-pedalis. *Folia* inferiora 9–10 poll. longa, 15–18 lin. lata. *Corollæ* lobi 2 poll. longi. *Labellum* 2 poll. longum et latum.—J. G. BAKER.

Fig. 1. Stamen with produced connective and stigma. 2. Apex of ovary with stylodia and base of style. 3 and 4. Seed. *All except 3 enlarged.*

M.S. del et lith.

Amomum longiscapum, Hook.f.

PLATE 2481.

AMOMUM LONGISCAPUM, *Hook. fil.*

SCITAMINEÆ. Tribe ZINGIBEREÆ.

A. longiscapum, *Hook. fil. in Kew Journ. Bot.* vi. 296 ; rhizomate late repente, caule foliifero elongato, foliis lorato-lanceolatis cuspidatis utrinque glabris basi cordatis sessilibus ligulis brevissimis truncatis, caule florifero elongato 1–4-cephalo, spicis paucifloris, bracteis oblongis obtusis, corollæ lobo dorsali oblongo concavo lateralibus lanceolatis, labello obovato-cuneato, connectivi lobo terminali parvo rotundato lateralibus lanceolatis falcatis, fructu ampullæformi glabro haud sulcato, seminibus angulatis.

HAB. West Tropical Africa : Sierra Leone, *Dr. Daniell.*

Folia pedalia, medio 2 poll. lata. *Pedunculus* floriferus 1–2-pedalis. *Corollæ* lobi 2 poll. longi. *Labellum* 2 poll. longum. *Fructus* siccus 2 poll. longus.—J. G. BAKER.

Fig. 1. Stamen with produced connective. 2. Apex of ovary bearing stylodia and base of style. 3. Stigma and upper part of style. 4. Seed. *All enlarged.*

M S del. et lith.

Anomum Mannii, Oliv. & Hanb.

Plate 2482.

AMOMUM MANNII, *Oliv. et Hanb.*

Scitamineæ. Tribe Zingibereæ.

A. Mannii, *Oliv. et Hanb. in Journ. Linn. Soc.* vii. 110; rhizomate valido late repente, caule foliifero elongato, foliis oblongis cuspidatis chartaceis utrinque glabris basi inæquilateraliter cuneatis supra vaginam breviter petiolatis ligulis parvis scariosis truncatis, spicis subsessilibus 2–3-floris, bracteis obtusis viridibus purpureo-maculatis, corollæ lobo dorsali oblongo obtuso concavo lateralibus linearibus, labello obovato-cuneato rubello, connectivi lobo centrali late ovato minuto lateralibus patulis linearibus, fructu seminibusque ignotis.

Hab. West Tropical Africa: Corisco Bay, 1° N. lat., *Mann* (No. 1902).

Caulis foliiferus 4–5-pedalis. *Folia* 6–8 poll. longa, medio 2–2½ poll. lata. *Corollæ* lobi 2–2½ poll. longi. *Labellum* 2½ poll. longum, 2 poll. latum.—J. G. Baker.

Fig. 1. Stamen with produced connective and style. 2. Apex of ovary bearing stylodia and base of style. *Both enlarged.*

Amomum pilosum, Oliv. & Hanb.

Plate 2483.

AMOMUM PILOSUM, *Oliv. et Hanb.*

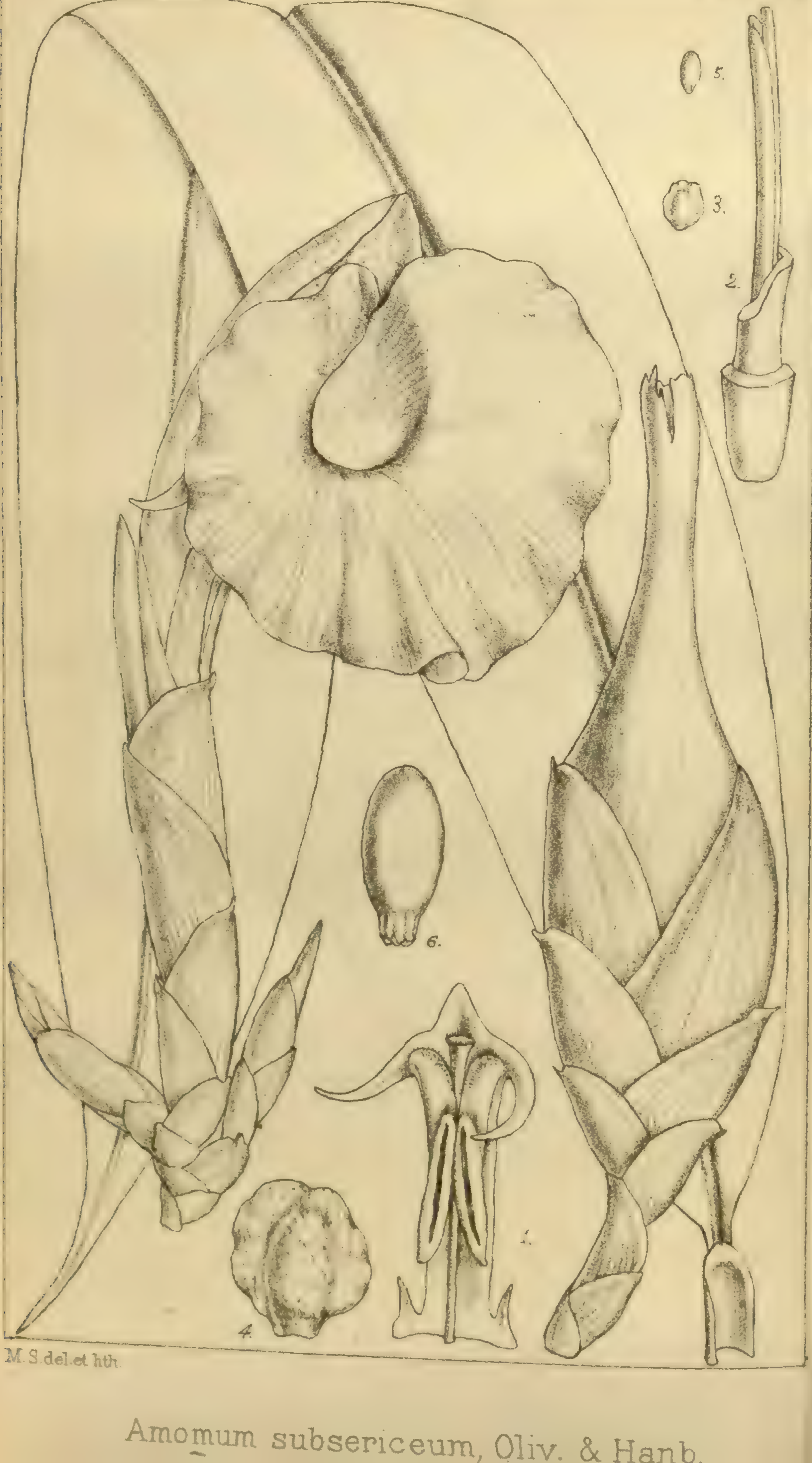
Scitamineæ. Tribe Zingibereæ.

A. pilosum, *Oliv. et Hanb. in Journ. Linn. Soc.* vii. 110 ; rhizomate valido late repente, caule foliifero orgyali, foliis oblongo-lanceolatis cuspidatis membranaceis utrinque præsertim ad faciem inferiorem laxe pilosis basi valde inæquilateralibus cuneatis vel rotundatis supra vaginam brevissime petiolatis ligulis parvis dense pilosis, spicis angustis sessilibus paucifloris, bracteis oblongis glabris scariosis cuspidatis, corollæ lobis parvis dorsali oblongo lateralibus lanceolatis, labello obovato-cuneato luteo parvo, connectivi lobo centrali deltoideo minuto lateralibus linearibus deflexis, seminibus immaturis globosis lineis horizontalibus undulatis notatis.

Hab. West Tropical Africa : Fernando Po, *Mann* (No. 1415).

Caulis foliiferus 6–8-pedalis. *Folia* inferiora subpedalia, 2–2½ poll. lata. *Corollæ* lobi 9 lin. longi. *Labellum* 1 poll. latum.—J. G. Baker.

Fig. 1. A flower. 2. Anther with produced connective and style. 3. Ovary bearing disk-like stylodium and base of style. 4. Seed enclosed in aril. 5 and 6. Seed divested of aril. ***All except 5 enlarged.***



Amomum subsericeum, Oliv. & Hanb.

Plate 2484.

AMOMUM SUBSERICEUM, *Oliv. et Hanb.*

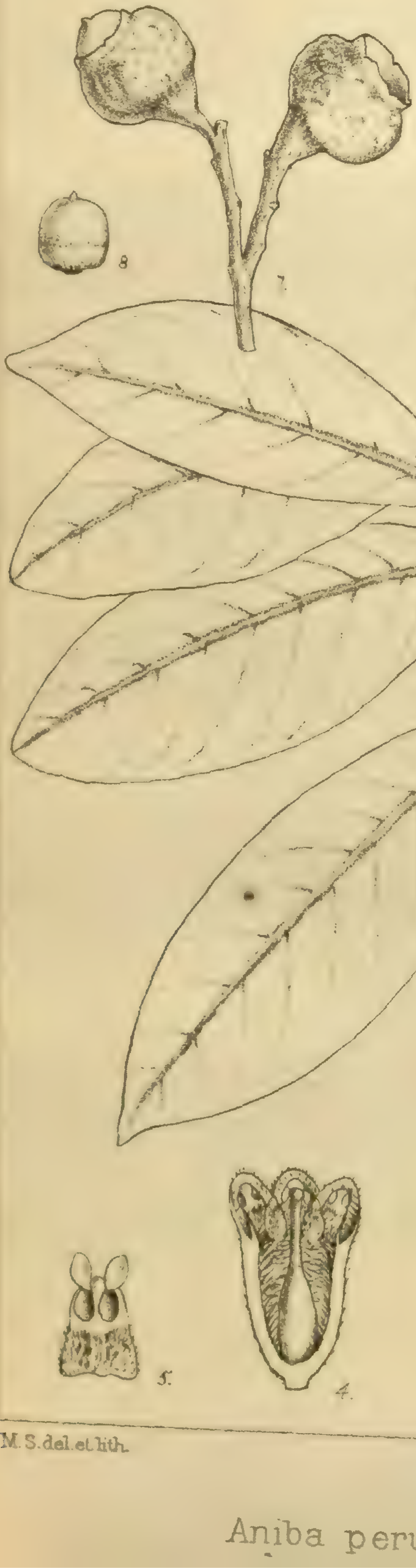
Scitamineæ. Tribe Zingibereæ.

A. subsericeum, *Oliv. et Hanb. in Journ. Linn. Soc.* vii. 110 ; rhizomate valido late repente, caule foliifero longissimo, foliis oblanceolato-oblongis acuminatis ad vaginam sensim attenuatis dorso obscure pubescentibus ligulis parvis rotundatis, spicis subsessilibus bifloris, bracteis scariosis apice rotundatis emarginatis mucronulatis, corollæ lobo dorsali oblongo cucullato lateralibus lanceolatis, labello lato convoluto, connectivi lobo terminali deltoideo lateralibus linearibus deflexis, fructu ampullæformi glabro haud sulcato, seminibus ellipsoideis nitidis.

Hab. West Tropical Africa : Gaboon River and Corisco Bay, *Mann* (No. 1904).

Caulis foliiferus 10–12-pedalis. *Folia* subpedalia, medio 2–2½ poll. lata. *Corollæ* lobi 2 poll. longi. *Labellum* convolutum 2–2½ poll. diam. *Fructus* siccus 2½ poll. longus. *Semina* 2 lin. longa.—J. G. Baker.

Fig. 1. Anther with produced connective and style. 2. Style, stylodia, and apex of ovary. 3, 4, 5, and 6. Seed ; 3 and 4 with aril ; 5 and 6 without aril. *All except 3 and 5 enlarged.*



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M.S.del.et lith.

Aniba perutilis, Hemsl.

Plate 2485.

ANIBA PERUTILIS, *Hemsl.*

Laurineæ.

A. perutilis, *Hemsl. in Kew Bulletin*, 1894, 7; ramulis ultimis graciliusculis cortice cinereo primum puberulo cito glabrescente, cataphyllis numerosis ovato-oblongis obtusis fusco-sericeis, foliis parvis distincte petiolatis coriaceis lanceolatis vel oblanceolatis obtusissimis vel rotundatis basi cuneatis adultis glabris subtus glaucis vel opacis supra vix nitidis venis primariis utrinque circiter 7–9 inconspicuis, pedicellis incrassatis, inflorescentiæ ramulis pubescentibus, perianthii pubescentis lobis crassis brevissimis rotundatis, tubo cylindraceo-campanulato intus densissime villoso, staminibus staminodiisque puberulis, antheris bilocellatis, ovario glabro, bacca matura ellipsoideo-conica basi fere truncata perianthii tubo valde incrassato corrugato cupuliformi fere inclusa.

Hab. Colombia: near Medellin, *W. Gordon*.

Folia cum petiolo circiter semipollicari $2\frac{1}{4}$–$2\frac{1}{2}$ poll. longa. *Pedicelli* 3–4 lin. longi. *Bacca* cum cupula circiter semipoll. longa et diametro.

This was sent to Kew by W. Gordon, Esq., H.B.M. Vice-Consul at Medellin, under the name of 'Laurel Comino,' and described as producing a timber valuable for building and cabinet-making. Particulars will be found in the *Kew Bulletin*, 1894, p. 7 and p. 197.—W. Botting Hemsley.

Fig. 1. Flowers, *natural size*. 2. A flower. 3. The same, with some of the perianth-lobes removed, revealing some of the stamens. 4. The same in vertical section, showing the ovary. 5. A stamen. 6. A staminode. *All enlarged*. 7. Fruit. 8. Seed. *Natural size*.

M.S. del. et lith.

Gironniera nitida, Benth.

Plate 2486.

GIRONNIERA NITIDA, *Benth.*

Urticaceæ. Tribe Celtideæ.

G. nitida, *Benth. Flora Hongk.* 325 ; arbor 40-pedalis glabra, foliis breviter petiolatis ovato-ellipticis sæpius breviter acuminatis basi rotundatis supra nitidis reticulatis venis primariis utrinque 6–7 incurvis, cymis ♂ axillaribus multifloris congestis petiolo sæpius longioribus, floribus brevissime pedicellatis, perianthii segmentis 5 obovatis concavis, drupis axillaribus solitariis ovoideis apiculatis pedunculo semper decurvo longioribus.

Hab. China : Hong Kong, *Champion*, Happy Valley, *Mr. Ford's native collector ;* island of Lantao, *Tutcher*.

Folia coriacea, in sicco cinnamomea, juvenilia parce pubescentia mox glabra, 2–4 poll. longa, 1–2 poll. lata ; petiolus 3–5 lin. longus ; stipulæ lanceolatæ, caducæ. *Filamenta* subulata, parce hirtella. *Antheræ* ellipticæ, inappendiculatæ. *Ovarii* rudimentum, in fl. ♂, hirtum. *Drupa* lævis, cum apiculo 5–6 lin. longa ; endocarpio osseo, mesocarpio (in spp. exsicc.) punctis resinosis copiosis scatente. *Albumen* inter radiculam et cotyledones parcum. *Embryonis* radicula teres incurva ; cotyledones crassæ, carnosæ, ut videtur concavæ 'externo internum cucullatim amplectente.'

Until the recent receipt of excellent specimens with male flowers and others in fruit, from Mr. Ford, to whom we owe so many interesting Chinese plants, Champion's specimens, described by Mr. Bentham (*l.c.*) and referred with doubt to *Gironniera*, were the only examples known to us. Only Mr. Bentham is cited by Planchon (*DC. Prodr.* xvii. 207), who gives our plant as '*species non satis nota*,' and by Maximowicz (Diag. Pl. Nov. xiii. 29 in *Mélanges Biol.* ix. (1872)).—D. Oliver.

Fig. 1. Male flower and buds. 2. Front and back views of stamens. 3. Fruit. 4. Section of seed showing embryo. *All enlarged.*

Trachymene celebica, Hemsl.

Plate 2487.

TRACHYMENE CELEBICA, *Hemsl.*

Umbelliferæ.

T. celebica, *Hemsl. in Kew Bulletin,* 1896, 37; robusta, undique rubro-pilosa, caudice crasso ut videtur prostrato coma foliorum hornotinorum terminante, caulibus floriferis erectis vel adscendentibus e basi comæ foliorum ortis sæpius trichotomis, foliis radicalibus longe petiolatis crassis herbaceis mollibus utrinque dense appresseque hirsutis circumscriptione rotundatis basi cordatis sæpissime alte 6-lobatis lobis plus minusve lobulatis simul crebre denticulatis caulinis paucis ad ramificationes similibus sed minoribus breviter petiolatis magis alte lobatis, pedunculis crassiusculis, umbellis subunisexualibus multiradiatis, radiis umbellarum femineārum crassiusculis rigidis confertissimis, involucri bracteis linearibus radios æquantibus vel brevioribus, petalis ovato-oblongis apiculatis, fructu cordiformi lævi minute punctato, carpellis valde lateraliter compressis marginatis vittis nullis vel obsoletis, gynophoro indiviso.

Hab. Celebes : Bonthain Peak at 10,000 feet, *A. H. Everett.*

Caules floriferi 12–18 poll. alti. *Folia* $1\frac{1}{2}$–$3\frac{1}{2}$ poll. diametro, radicalium petiolis 3–6 poll. longis. *Radii* 4–9 lin. longi. *Carpella* $2\frac{1}{2}$–3 lin. longa.

This is closely allied to the Bornean *T. saniculæfolia,* Hook. f. (Pl. 2308), but it is altogether a much more robust plant. With the exception of one species in New Caledonia, the genus is otherwise Australian.—W. Botting Hemsley.

Fig. 1. A bract. 2. A male flower. 3. Pistil. 4. Fruit. 5. Section of a carpel. *All enlarged.*

M E del et lith

Plectranthus esculentus, N.E. Brown.

PLATE 2488.

PLECTRANTHUS ESCULENTUS, *N. E. Brown.*

LABIATÆ. Tribe OCIMOIDEÆ.

P. esculentus, *N. E. Brown in Kew Bulletin*, 1894, 12; radice tuberosa esculenta, caulibus demum decumbentibus pubescentibus, foliis (tempore florentis omnino delapsis) sessilibus oblongis obtusis basi cuneato-angustatis utrinque minute pubescentibus venis primariis subtus raro prominentibus racemis solitariis vel fasciculatis simplicibus scabridis bracteatis ex axillis foliorum delapsorum enatis, bracteis oppositis ellipticis obtusis scabridis pedicellum æquantibus vel brevioribus, calyce campanulato scabrido inæqualiter quinquefido dente postico elliptico-ovato obtuso reliquis lanceolatis acuminatis, corolla calycem plus duplo excedente lutea compressa inæqualiter bilabiata tubo basi brevissime gibboso labio superiore brevissimo 4-dentato labio inferiore falcato-cymbiformi subacuto pubescente, staminibus liberis.

HAB. Natal, *Wood* (No. 3633.)

Caules subpedales. *Folia* $1\frac{3}{4}$–3 poll. longa, $\frac{1}{2}$–1 poll. lata. *Racemi* $\frac{3}{4}$–1 poll. longi. *Bracteæ* 1-lin longæ et latæ. *Pedicelli* 1–$2\frac{1}{2}$ lin. longi. *Calyx* $1\frac{1}{2}$–2 lin. longus. *Corolla* 7 lin. longa.

This plant is known in Natal as the 'Umbondive or Kaffir Potato,' the tuberous root-stock being much appreciated as food by the Kaffirs. It was first sent to Kew by Mr. J. M. Wood, the Curator of the Botanic Garden, Durban, in 1886.—N. E. BROWN.

Fig. 1. Calyx attached. 2. Corolla. 3. Front and back views of stamen. 4. Young nutlets. *All enlarged.*

M. S. del. et lith.

Plectranthus floribundus, N.E.Brown.

PLATE 2489.

PLECTRANTHUS FLORIBUNDUS, *N. E. Brown.*

LABIATÆ. Tribe OCIMOIDEÆ.

P. floribundus, *N. E. Brown in Kew Bulletin*, 1894, 12 ; caule elato erecto sublignoso pubescente, foliis (tempore florentis omnino delapsis) sessilibus oblongis obtusis basi obtuse rotundatis marginibus subcrenatis utrinque subscabridis venis subtus prominenter reticulatis, racemis solitariis vel fasciculatis elongatis multifloris simplicibus vel ramosis scabridis bracteatis ex axillis foliorum delapsorum enatis et paniculam elongatam nudam simulantibus, bracteis oppositis obovato-ellipticis subacutis scabridis pedicellum scabridum æquantibus, calyce campanulato scabrido inæqualiter quinquefido dente postico late elliptico obtuso reliquis lanceolatis acuminatis, corolla calycem plus duplo excedente lutea compressa inæqualiter bilabiata, tubo basi brevissime gibboso, labio superiore brevissime 4-dentato, labio inferiore falcato-cymbiformi subacuto pubescente, staminibus liberis.

HAB. Natal : Inanda, 1,800 ft., *Wood* (Nos. 646, 3843).

Caulis 2–4-pedalis, parte florifera 1–1½ ped. longa. *Folia* 2–3 poll. longa, ¾–1¼ poll. lata. *Racemi* 1½–2½ poll. longi. *Bracteæ* 1½ lin. longæ, 1–1¼ lin. latæ. *Pedicelli* 1½–2 lin. longi. *Calyx* 3 lin. longus. *Corolla* 7 lin. longa.

This species is closely related to *P. esculentus* (Pl. 2488), but it is a larger plant, with decidedly sessile leaves, having broader and more rounded bases and more prominent venation.—N. E. BROWN.

Fig. 1. Calyx attached and bracteole. 2. Corolla. 3. Back and front views of stamen. 4. Young nutlets. *All enlarged.*

M. S. del. et lith.

Luffa Batesii C.H Wright

Plate 2490.

LUFFA? BATESII, *C. H. Wright.*

Cucurbitaceæ. Tribe Cucumerineæ.

L.? Batesii, *C. H. Wright* (*sp. nov.*); suffruticosa, scandens, caulibus striatis, foliis petiolatis subcoriaceis profunde cordatis acuminatis sinuato-dentatis puberulis venis ultimis utrinque conspicuis densissime reticulatis, cirrhis lateralibus bifurcatis, racemis ♂ quam folia paulo longioribus, calyce extus pubescente infundibuliformi dentibus 5 subulatis tubo inferne inflato, petalis 5 luteis ovatis acuminatis breviter unguiculatis venis primariis 3 basi apiceque convergentibus, staminibus 5, filamentis latis calycis fauce insertis, antheris omnibus sinuatim bilocularibus, floribus ♀ et fructu non visis.

Hab. West Tropical Africa: Cameroons River, *G. Mann* (No. 719); Batanga, *G. L. Bates* (No. 338); Angola, 70 miles from Ambriz, on the road to Bembe, *Monteiro*.

Caules 20 ped. longi (fide *G. Mann*). *Folia* 7 poll. longa, 5-6 poll. lata; petioli 1–2 poll. longi. *Racemi* 9 poll. longi. *Calycis* tubus 6–8 lin. longus. *Corolla* 3 poll. diam.

This differs from the typical species of *Luffa* in having suffrutescent stems, subcoriaceous leaves, and 5 bilocular anthers, which last character, as well as the eglandular petiole, separates it from the genus *Sphærosicyos*, Hook. f., to which its inflorescence bears some resemblance. A knowledge of the female inflorescence and fruit, at present a desideratum, may cause this to be elevated to the rank of a distinct genus, as proposed in manuscript by Dr. Schweinfurth, for an allied species collected by himself in Central Africa.—C. H. Wright.

Fig. 1. A bud with bracteole on pedicel. 2. Calyx and androecium, the hollow tube of the former in vertical section. *Both enlarged.*

M S del et lith.

Senecio Prattii, Hemsl.

Plate 2491.

SENECIO (§ CREMANTHODIUM) PRATTII, *Hemsl.*

Compositæ. Sub-order Senecionideæ.

S. Prattii, *Hemsl.* (*sp. nov.*); scaposus præter inflorescentiam glaber, foliis omnibus radicalibus crassis subcarnosis longissime petiolatis cordato-oblongis apice rotundatis obscure remoteque callosodenticulatis, venis immersis fere obsoletis, scapo sæpe solitario erecto monocephalo vaginis 2 subfoliaceis instructo supra medium plus minusve araneosis, capitulo amplo nutante, involucri bracteis circiter 15 uniseriatis herbaceis araneoso-pilosis mollibus anguste oblongis acutis radio multo brevioribus, radii floribus circiter 15 elongatis, corollæ limbo angusto sæpius oblique breviter bifido, achæniis (maturis non visis) glabris inæqualiter plurialatis.

Hab. Western China: chiefly near Tachienlu, Szechuen, at 9,000 to 15,000 feet, *Pratt* (Nos. 492, 548, and 593).

Scapus 12–15 poll. altus. *Folia* cum petiolo $2\frac{1}{2}$–6 poll. longa, petiolo 2–4 poll. longo. *Capitula* $2\frac{1}{2}$–$3\frac{1}{2}$ poll. diametro. *Bracteæ* circiter 6 lin. longæ. *Flores radii* $1\frac{1}{2}$–2 poll. longi.—W. Botting Hemsley.

Fig. 1. A ray-flower. 2. A pappus-bristle. 3. A disk-flower. 4. Anthers. 5. Apex of style and stigmas. 6. A young achene. *All enlarged.*

M.S. del. et lith.

Rhododendron argyrophyllum Franch. var. nankingense Rehd.

Plate 2492.

RHODOCODON URGINEOIDES, *Baker*.

Liliaceæ. Tribe Scilleæ.

R. urgineoides, *Baker* (*sp. nov.*) ; bulbo globoso tunicis exterioribus pallidis, foliis 2–3 synanthiis lanceolatis glabris flaccidis, scapo tereti elongato, floribus pluribus in racemum laxum dispositis, pedicellis brevibus floriferis sæpissime cernuis, bracteis ovatis membranaceis calcaratis, perianthii albi campanulati segmentis ovatis apice leviter cucullatis tubo æquilongis vel brevioribus, staminibus prope medium tubi insertis filamentis brevibus, fructu oblongo-trigono, seminibus in quoque loculo pluribus nigris applanatis.

Hab. Central Madagascar : forests of the province of Tanala, alt. 4,000-4,500 ft., *Dr. Forsyth Major* (Nos. 44 and 445). Also *Baron* (Nos. 3191, 6754).

Bulbus 1 poll. diam. *Folia* subpedalia, medio 6–9 lin. lata. *Perianthium* 3 lin. longum. *Capsula* 4 lin. longa.

This is a second species of an endemic Madagascar genus, of which the type (*R. madagascariensis*, Baker) is described and figured in the *Journal of the Linnean Society*, xviii. 280, t. 8.—J. G. Baker.

Fig. 1. Perianth closed. 2. Perianth cut open to show the stamens. 3. Pistil. 4. Capsule. 5. Seed. *All enlarged*.

M.S. del. et lith.

Stenolirion Ellictii, Baker.

PLATE 2493.

STENOLIRION ELLIOTII, *Baker*.

AMARYLLIDEÆ. Tribe AMARYLLEÆ.

Stenolirion, *Baker* (*gen. nov.*). *Perianthium* superum, tubo elongato cylindrico, limbi lobis linearibus patulis. *Stamina* 6, ad faucem tubi inserta, filamentis liberis filiformibus, antheris oblongis versatilibus dorsifixis. *Ovarium* inferum, triloculare, ovulis in quoque loculo pluribus ; stylus elongatus, filiformis stigmate simplice. *Fructus* baccatus. *Semina* in quoque loculo plura, testa laxa crassiuscula pallide grisea, albumine cartilagineo, embryone recto centrali. Bulbus *ovoideus tunicis multis membranaceis apice truncatis.* Folia *plura, radicalia, rosulata, synanthia, linearia, firmula, margine denticulata.* Pedunculus *brevis, radicalis.* Umbellæ *paucifloræ.* Spathæ *valvæ lanceolatæ, membranaceæ, pedicellis brevibus.*

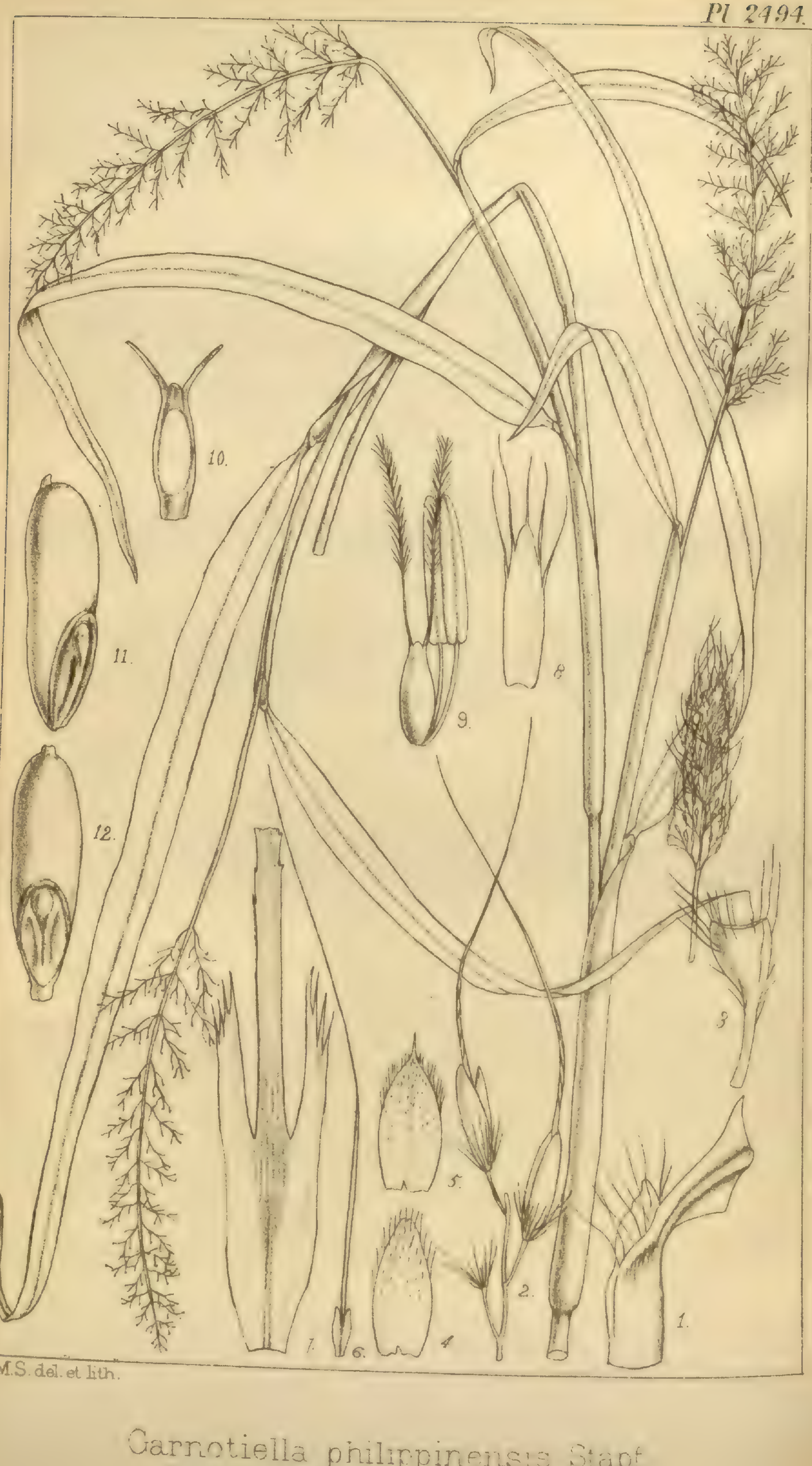
S. Elliotii, *Baker* (*sp. unica*).

HAB. Central Africa : Urundi, 4,000–5,000 feet, *Scott Elliot* (No. 8175).

Bulbus 1½ poll. diam. *Folia* semipedalia, 4–4½ lin. lata. *Pedunculus* 3–5-pollicaris. *Perianthii* tubus 2 poll. longus ; segmenta limbi tubo paulo breviora. *Bacca* 12–15 lin. diam.

This interesting new genus resembles *Crinum* in habit, but differs both from that genus and *Hæmanthus* in its seeds, which are so numerous in each cell as to be angled by pressure.—J. G. BAKER.

Fig. 1. Margin of leaf. 2 and 3. Seeds. 1 *and* 3 *enlarged.*



M.S. del. et lith.

Carrotiella philippinensis, Stapf

Plate 2494.

GARNOTIELLA PHILIPPINENSIS, *Stapf.*

Gramineæ. Tribe Agrostideæ.

Garnotiella, *Stapf* (*gen. nov.*). *Spiculæ* 1-floræ, secus ramulos inarticulatos paniculæ solitariæ, pedicellatæ, cum pedicello articulatæ, flore hermaphrodito. *Glumæ* 3, 2 exteriores vacuæ, subæquales, prima muticæ, secunda mucronulata, tenuiter hyalinæ, enerviæ; tertia florens minuta, hyalina, biloba, e loborum sinu aristata, arista geniculata; palea minuta, hyalina. *Stamina* 2. *Styli* distincti. *Caryopsis* oblongo-linearis, glumis inclusa, libera. Gramen, *ut videtur*, *annuum*, *foliis flaccidis planis.* Panicula *terminalis*, *pedunculata*, *angusta*, *stricta*, *ramis capillaribus paucis verticillatis vel solitariis.*

G. philippinensis, *Stapf* (*sp. unica*); culmis glabris subgracilibus, vaginis glabris, ligula tenuiter membranacea breviter lateque ovata pilis stipata, laminis e basi admodum angusta lineari-lanceolatis acutis flaccidis glabris in margine asperulis, panicula glabra, pedicellis apice cupulatim dilatatis atque breviter ciliatis, spiculis pallidis basi involucello brevi piloso ornatis, gluma i sub apice pilosula, ii superne ciliata, iii lobis superne ciliolatis, palea quam gluma iii plus quam triplo breviore parce ciliata.

Hab. Philippine Islands: Miagao, Panay, *Vidal* (No. 3994).

Foliorum lamina 4–4½ poll. longa, 3–4½ lin. lata. *Panicula* 1½–2 poll. longa, 6 lin. lata; rami infimi 4 6 lin. longi; pedicelli laterales circiter 1 lin. longi. *Spiculæ* 1 lin. longæ; gluma iii ⅞ lin. longa, arista 3 lin. longa. *Antheræ* ¼ lin. longæ. *Caryopsis* ⅝ lin. longa, ⅛–⅙ lin. lata.

Nearest allied to *Garnotia*, but the spikelets are solitary, not geminate; the empty glumes nerveless, and the pale is reduced to a flat, hyaline, nerveless scale. I have never seen more than two stamens, and there seem to be no lodicules present.—O. Stapf.

Fig. 1. Ligule. 2. Branchlet of inflorescence. 3. Upper end of pedicel. 4. Glume i. 5. Glume ii. 6. Glume iii. 7. Glume iii. expanded (more enlarged). 8. Pale. 9. Stamens and ovary. 10. Ovary. 11. Grain, side view. 12. The same, front view. *All enlarged.*

M. S. del. et lith.

Aster Bowerii, Hemsl.

Plate 2495.

ASTER BOWERII, *Hemsl.*

Compositæ. Sub-order Asteroideæ.

A. Bowerii, *Hemsl. in Journ. Linn. Soc.* xxx. 113; perennis, nanus, hispidulo-hirsutus, caule simplice vel e basi pauciramoso mono-oligocephalo, foliis lineari-spathulatis obtusis vel rotundatis utrinque pilis longis albidis vestitis, capitulis radiatis, involucri bracteis numerosis sub-biseriatis lineari-lanceolatis acutis piloso-hirsutis, achæniis clavatis parce hirsutis simul nigro-maculatis, pappi setis fulvidis leviter scabridis fragilibus.

Hab. Tibet : sandy, gravelly soil on hillsides at 18,000 ft., *Thorold*; Gooring Valley, lat. 30° 12′ N., long. 90° 25′ E., at about 16,500 ft., *Littledale*.

Planta 1–5 poll. alta. *Folia* 3–12 lin. longa. *Capitula* 9–15 lin. diametro.

This may prove to be specifically the same as *A. flaccidus*, Bunge, a native of the Alatau Mountains, Turkestan.—W. Botting Hemsley.

Fig. 1. A bract of the involucre. 2. A ray-flower. 3 Pappus-bristle. 4. A disk-flower. 5. Anthers. 6. Apex of style. 7. Achene from which the pappus has fallen. *All enlarged.*

Habenaria polytricha, Rolfe.

Plate 2496.

HABENARIA POLYTRICHA, *Rolfe.*

Orchideæ. Tribe Ophrydeæ.

H. polytricha, *Rolfe* (*sp. nov.*); tuberibus oblongis, caule subelato medio folioso, foliis oblongo-lanceolatis breviter acuminatis basi attenuatis, racemis circa 10-floris, bracteis ovato-lanceolatis acuminatis, sepalo postico oblongo-lanceolato subconcavo apice subito truncato et setifero lateralibus ovatis apice caudato-acuminatis et deflexis, petalis profunde bipartitis lobis posticis longissimis filiformibus incurvis anticis longissimis in segmenta 4–5 filiformia divisis, labello profunde tripartito lobis omnibus in segmenta filiformia numerosa divisis, calcari elongato-lineari subclavato incurvo, columna brevi, antheræ canalibus porrectis brevibus, processubus stigmaticis oblongis crassiusculis.

Hab. Formosa : South Cape, *A. Henry* (No. 1246).

Herba $1\frac{1}{2}$ ped. alta. *Tubera* 1 poll. longa. *Folia* $2\frac{1}{2}$–5 poll. longa, 9–14 lin. lata. *Racemus* 5–6 poll. longus. *Bracteæ* 8–10 lin. longæ. *Sepala* 4–5 lin. longa, posticum $1\frac{1}{2}$ lin., lateralia $2\frac{1}{2}$ lin. lata. *Petala* 8–9 lin. longa. *Labellum* 8–9 lin. longum. *Calcar* 8–9 lin. longum. *Columna* $2\frac{1}{2}$ lin. longa. *Stigmatis* processi $1\frac{1}{4}$ lin. longi.

The third species of a small group to which Dr. Kränzlin has given the name *Medusæformes*; differing from *H. andamanica*, Hook. f., in the far longer divisions of the petals, and from *H. ternatea*, Rchb. f., in having the front lobe of the lip divided into many filiform segments.—R. A. Rolfe.

Fig. 1. Dorsal sepal. 2. Petal. 3. Column, side view. 4. Pollinium. *All enlarged.*

M.S.del. et lith.

Marsdenia efulensis, N E. Br.

Plate 2497.

MARSDENIA EFULENSIS, *N. E. Brown.*

Asclepiadeæ. Tribe Marsdenieæ.

M. efulensis, *N. E. Brown* (*sp. nov.*); caule suffruticoso volubili glabro, foliis petiolatis elliptico-oblongis breviter cuspidatis acutis basi rotundatis utrinque glabris, cymis umbelliformibus axillaribus oppositis 10–12-floris sessilibus, pedicellis gracilibus glabris minutissime asperatis, sepalis ellipticis obtusissimis ciliolatis, corollæ tubo brevi campanulato lobis ovatis obtusis patentibus dorso glabris intus puberulis, coronæ lobis erectis parte inferiore columnæ staminum adnata parte superiore libera basi latis leviter concavis alatis superne dorso compresso-gibbosis apice breviter subulatis, stylo apice valde convexo.

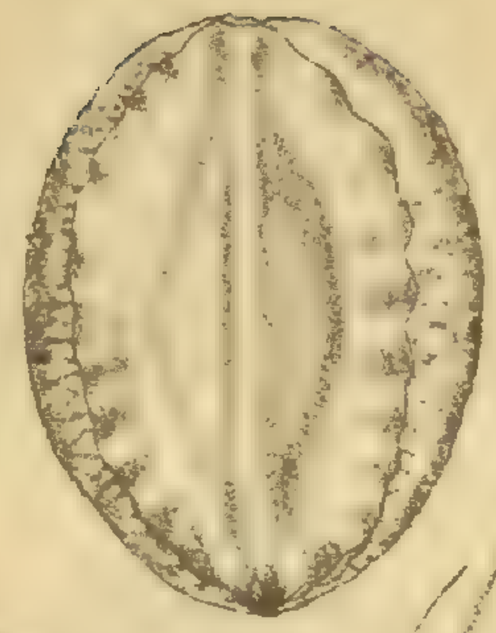
Hab. West Tropical Africa: Efulen, Cameroons, *Bates* (No. 378).

Foliorum petioli 1–1½ poll. longi, laminæ 3–4½ poll. longæ, 1¼–2¼ poll. latæ. *Pedicelli* 6–8 lin. longi. *Sepala* ½–⅔ lin. longa, ½ lin. lata. *Corollæ tubus* ¾ lin. longus, lobi 1½–1¾ lin. longi, 1 lin. lati. *Coronæ lobi* 1¼ lin. longi. *Columna staminum* 1 lin. longa.

This distinct and well-marked species, like some other members of the genus, has the pollen-masses somewhat concealed in depressions at or under the margin of the dilated convex apex of the style. The cymes are truly axillary, and arise from both axils of each pair of leaves.—N. E. Brown.

Fig. 1. Bud. 2. Flower. 3. Sepal from within. 4. Corona and staminal column. 5. Staminal column with corona removed. 6. Pollinia. *All enlarged.*

4.



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Lucuma multiflora, A.D.C.

Plate 2498.

LUCUMA MULTIFLORA, *A. DC.*

Sapotaceæ.

L. multiflora, *A. DC. Prodr.* viii. 168; arborea ramulis floriferis crassiusculis glabris, cortice cinereo, foliis sparsis vel ad apices ramulorum confertis breviter petiolatis coriaceis glabris obovato-oblongis vel lanceolatis subacutis obtusis vel rotundatis basi cuneatis venis primariis lateralibus utrinque sæpius 11–15, floribus distincte pedicellatis inter vel infra folia secus ramulos fasciculatis glabris crassis subcoriaceis, sepalis 4 oblongo-orbicularibus 2 interioribus 2 exterioribus, corollæ lobis 6 rotundatis 3 interioribus 3 exterioribus, staminibus 6 petalis oppositis inclusis cum staminodiis subulatis alternantibus filamentis brevibus antheris extrorsis, ovario hirsuto 4-loculari stylo glabro demum exserto, fructu pomiformi vel depresso-pyriformi abortu unispermo pericarpio carnoso crassissimo, semine exalbuminoso subgloboso testa castanea nitida hilo maximo cotyledonibus æqualibus.

Hab. West Indies: Jamaica, Porto Rico, Dominica, Santa Lucia, St. Vincent, and Trinidad; various collectors.

Arbor excelsa. *Folia* 3–8 poll. longa. *Flores* $3\frac{1}{2}$–5 lin. longi. *Fructus* circiter 2 poll. diametro.

This handsome and apparently widely spread West Indian tree is very similar to *L. pauciflora*, A. DC. (Achras vitellina, *Tussac, Flore des Antilles*, iv. t. 19), but that has smaller obovate leaves, fewer flowers, and the fruit is figured as six-seeded, the seeds having a relatively narrow hilum. The bright yellow fruit of *L. multiflora* bears the name of 'penny-a-piece' or 'penny-piece' in some of the islands.—W. Botting Hemsley.

Fig. 1. A flower. 2. Portion of a corolla laid open. 3. Pistil. 4. Ovary in cross-section. *All enlarged.* Fig. 5. Vertical section of fruit showing the whole seed. 6. Seed. 7. A cotyledon. *All natural size.*

M.S. del. et lith.

Melanophylla crenata, Baker.

Plate 2499.

MELANOPHYLLA CRENATA, *Baker*.

Cornaceæ.

M. crenata, *Baker* (*sp. nov.*) ; suffruticosa, glabra, ramulis teretibus, foliis alternis petiolatis oblongis acutis crenatis penninerviis siccitate nigrescentibus basi crenatis, floribus in racemos laxos multifloros terminales dispositis, pedicellis ascendentibus basi bracteis parvis ovatis persistentibus suffultis, ovario turbinato, lobis calycinis parvis ovatis obtusis, petalis oblongis obtusis flore expanso patulis vel reflexis, staminibus petalis brevioribus antheris oblongis filamentis brevissimis, stylis 2–3 recurvatis apice stigmatoso-capitatis.

Hab. Madagascar : forests of the province of Tanala, alt. 4,000–4,500 feet, *Dr. Forsyth Major* (Nos. 118, 296, and 382).

Folia 3–4½ poll. longa, medio 18–21 lin. lata ; petioli 1–1½ poll. longi. *Ovarium* 1 lin. longum. *Lobi calycini* ¼ lin. longi. *Petala* 2 lin. longa. Fructus ignotus.

This genus of Cornaceæ, which is only known in Madagascar, was described in the 21st volume of the *Journal of the Linnean Society*, p. 352. This is the first time that it has been figured. Two species were known previously. The fruit is still a desideratum.—J. G. Baker.

Fig. 1. Expanded flower and bud. 2. Anther. 3. Pistil. 4. Ovary in vertical section. *All enlarged.*

M.S.del.et lith.

Batesanthus purpureus, N.E. Br.

Plate 2500.

BATESANTHUS PURPUREUS, *N. E. Brown.*

Asclepiadeæ. Tribe Periploceæ.

Batesanthus, *N. E. Brown* (*gen. nov.*). *Calyx* 5-partitus. *Corolla* rotata, alte 5-loba, lobis sinistrorsum obtegentibus. *Corona* basi corollæ affixa, breviter annularis, indistincta. *Stamina* intra coronam affixa, filamentis liberis ; antheræ erectæ, anguste oblongæ, apice appendicibus cohærentibus terminatæ, glabræ. *Pollen* granulosum. *Corpusculorum* laminæ bipartitæ. *Stylus* apice breviter conicus. *Folliculi* non visi. Frutex *volubilis*. Folia *opposita*, *ampla*, *petiolata*, *stipulata*. Paniculæ *axillares*. Flores *magni*.

B. purpureus, *N. E. Brown* (*sp. unica*) ; glabra, caule subferrugineo parce verruculoso, foliis distantibus petiolatis oblongis vel elliptico-oblongis acute cuspidatis basi cordatis, stipulis interpetiolaribus reflexis dentatis, paniculis pedunculatis elongatis laxis quam folia multo longioribus ramis inferioribus dichotomis superioribus simplicibus racemoso-floriferis, sepalis ovatis subacutis, corolla magna purpurea rotata profunde 5-loba lobis elliptico-oblongis obtusissimis, corona indistincta annulari lobulis quinque minutis staminibus omnino adnatis.

Hab. West Tropical Africa : Efulen, Cameroons, *Bates* (No. 383).

Foliorum petioli $1\frac{1}{4}$ poll. longi, laminæ 6–7 poll. longæ, 3–$3\frac{1}{4}$ poll. latæ. *Panicula* (pedunculo 4 poll. longo incluso) 1 ped. longa, ramis $\frac{1}{2}$–2 poll. longis. *Pedicelli* 3–7 lin. longi. *Sepala* $1\frac{1}{2}$ lin. longa, $\frac{3}{4}$ lin. lata. *Corolla* $1\frac{1}{2}$–$1\frac{3}{4}$ poll. diam., lobis 9 lin. longis, 5–$5\frac{1}{2}$ lin. latis. *Columna staminum* 1 lin. longa et lata.

This fine Asclepiad appears to be nearest related to *Chlorocodon*, with which it agrees in habit and stipules ; but the corona, which is not very evident, and the staminal column are entirely different.—N. E. Brown.

Fig. 1. Sepal seen from within. 2. *Corona and staminal column.* 3. The same partly dissected to show the position of the pollen-carriers. 4. Pollen-carrier. *All enlarged.*

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SPOTTISWOODE AND CO., NEW-STREET SQUARE
LONDON